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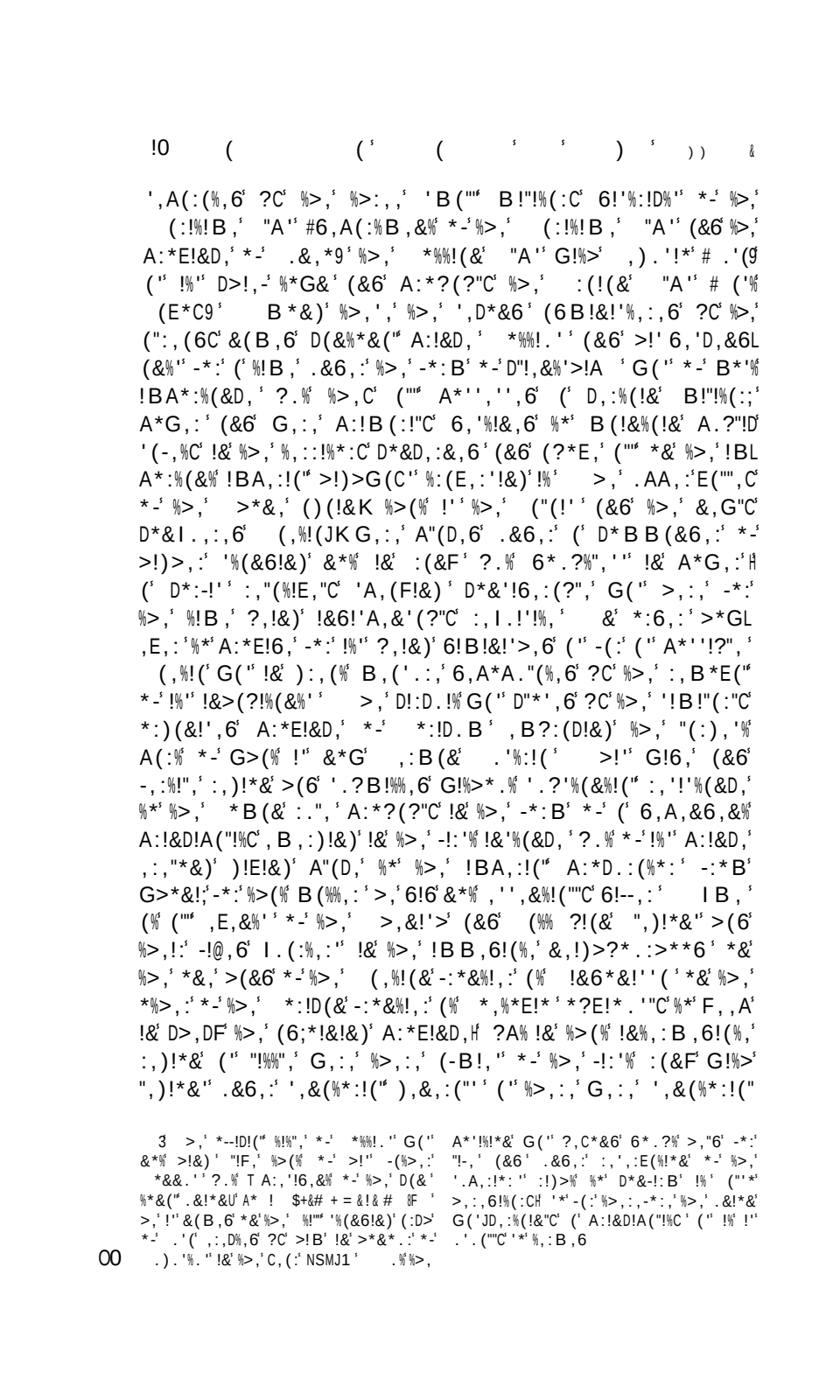
'-%,:'%>,'D(BA(!)&'*- :('':'%>,'D*&I.,:,6'"(&6G('A:*?(?"C*:)(&!',6'!&'.D>(G(C%>(%%>,'D*('%G,&%*%>,'>:(D!(&',BA!:,'('X!AA,'">('>*G&A 'D '+# A'RSZ9'(&6'%>,'G,'%,:&A*:%!*&'G(''; .'%"!F,'>:(D,'(''!)&,6'!&'-!,-'%*'%>,'&(%lE,'A:!&D,''!&'A"(D,'*- &,'*-'G>*B'B.'% >(E,'D*B,'%>,'* !$ $+&## + = &!& # ' $!$'$&' !5 !$'# ') ' /0ZO9'G>*'G('%!""(D%!&)'.&6,:!?,:!.''>,'.'.('('.BAL %!*&'%>(% *,'!('G('(%-!:'%D*B?!&,6'G!%>'""C:!D.B':,'%'*&"C'*&'%>,'D!:LD.B'%(&D,'%>(%!&'%>,',&.B,:(%!*&'6*,'&%,@%,&6'(%"%*'%>,'E(''("J'%(%,'(&6'%>,'A:*J D.:(%*:!('*A:*E!&D,''(&6'*'-(:'("!''!&'6.,'F,,A!&)G!%>'%>(%('.BA%!*&'&'%>,'*%>,:'>(&6',E,:C%>!&)'(6B!%'*-',('C,@A"(&(%!*&'!-'B("%D"!,&%J'%(%,"c:*','!& *,'!('(-%,:'%>,'G(:'*-':('.'H%>,','G,:,'('.D>-:*B'%>,'*.%',%.&6,:'%>,',BA,:*:'(&6'("%>,',&(%,'6!6'&*%%(F,'A(:%!&'%>,!:''.DLD,''!E,'(&&,@(%!*&'(&6'D*&E,:'!*&'!&%* (6'*,'!('?,,&'*:!)!&("C'('A(:%'*-%>,'A:*E!&D,'*-'"C:!D.B'!%G*."6'>(E,':,%(!&,6'%>!''&('B,H-*:'*&'%>,'6!E!'!*&'*-'(' A:*E!&D,'%>,'&(B,'G('.'.("C':,%(!&,6'(&6'*&"C'('6,-!&!&)',A!%>,%(66,6' .-'%>,'(AA,""(%!*&'"C:!D.B'G>!D>'!*'6*.?%","':,A:*6.D,'' + 'G('("G(C"!&'%>!''D*&&,D%!*&':,'%:!D%,6'%*'%>,'.AA,:'# ("B(%!(9'(&6'%>,'"*G,:'# (&&*&!(9' *:,*E,:'!-' *,'!('G('(' A(:%'*-' ""C:!D.B'%>,:,'G('&*':**B'",-%-*:'%>(% :,-,D%'*-' *,'!('(&6' :!?("!('*:'!&'*%>,:'G*:6''-*:'>!'F!&)"C'A:,6,D,''*:' ('%"C'!%'!''-(:'-:*B'A:*?(?",'%>(%'!&'NRN'('D*BB(&6'*-''.D>',@%,&%'(&6'!BA*:%L (&D,''>*."6'>(E,'?,,&',&%:.'%,6'%*'('!&)",'',&(%*:!("*E,:&*:' &'%>,'*%>,:'>(&6',E,:C%>!&)'(6B!%'*-',('C'@A"(&(%!*&' !-' 'B("D"!,&%J'%(%,"c:*',' !& *,'!('(-%,:'%>,'G(:' *-':('.'H%>,',' G,:,'('.D>-:*B'%>,'*.%',%.&6,:'%>,',BA,:*:'(&6'("%>,',&(%,'6!6'&*%%(F,'A(:%'!&'%>,!:''.DLD,''!E,'(&&,@(%!*&'(&6'D*&E,:'!*&'!&%* RN NRN'?,%G,,&',BA,:*:'(&6',&(%,'!&' !*''"!!!'/R'!%'!''&*%&(B,6'(&6''*' ("D*&%(!&,6'!&'T ("B(%!('U'.%'%>!'',&.B,:(%!*&'6*,'&*% ,@%,&6'("" %*'%>,'E(''("J'%(%,'(&6'%>,'A:*J D.:(%*:!("A:*E!&D,''(&6''*'-(:'("'!''!&'6.,'F,,A!&)G!%>'%>(%('.BA%!*&'&'%>,'*%>,:'>(&6'G,!)>%C'(:).B,&%'%,"" ()(!&'%>,'.'.("D*&D,A%!*&



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4 ,' F&*G' %>!'' :*(6' *&"C' !&' %>,' '>(A,' G>!D>' %>,' ,BA,:*:' "(.6!.'' *&' *-'%>,' D*&'%:.D%*:'')(E,'%*' !%H *:!)!&("C' *-' D*.:',' !%' D(&&*%' >(E,' ?,,&' D("",6' = !' !#4 !' ?.%' *&"C' = !' #%# &!' (&6' G,' D(&' >(:6"C' :,L)(:6' ('!%'' %,:B!&.'' !&' %("C' "%!.B' !&' %>,' &,!)>?*.:>**6' *-' %>,' B*6,:&' ,&!D,'' !&D,'.&6,:').'%.'' ("" %>,' !BA,:!(" :*(6'' '%!"" ",6' %*' *B,' >(%' %>,' :*(6' :(&' %>:*.)>' %>,' .AA,:' 6!),'E("",C!'' '>*G&?C'%>,' B!","%*&,' -*.&6'(% ,:(&# '2') 'E' 0[[Z9H %>(% !%' ",6' %*' %>,' (&.?,' !'' (%%,'%,6H %>,' D*&&,D%!*&' *-'%>,' B(F!&)' *-' %>!'' :*(6' G!%>' %>,' -*.&6!&)' *-').'%(' !&6,"!J' D.B' %>*.)>' %>!'' G(''(%' -!:'%' *&"C' (' B(:F,%JE!"")',' A # F' !'' B*:,' %>(&' A:*?(?",' # ' 2') ' !!!' A' N//9H' !&' G>(%' G(C' .)'?.:)' (&6' %>,' (&.?,' G,:,' :,(D>,6' -:*B' ,:(&' G,' 6*' &*% F&*G' .?',I.,&%"C' %>,' :*(6' G(''' :,D%!-!,6' '*' (''%*'',(E,' %>,' 6!),'(% (.%Q,&' (&6' %*' ",(6' .A' %>,' !'(D>' E("",C' *E,:' %>,' :,&&,:' %*' .)'?.:)

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>:(-D!(& G(:*- !* *BA",B,&%(:C !&' '*B,' B,('.:,%*' %>!'' (&&*&!(& c,@A,6!%!*&* -' !?,:!.' G('%>(% G>!D>G('' '!B."%(&,*.'"C .&6,:%(F,& ()(!&'% %>,' >:(D!(&' ?C .D!.' !'*A,:L >(A' %>,' -!:'%)*E,:&*:'%>(% *,'!(' >(6**-' !%'' *G& >,' %G*'):,(% &,!)>?*.:!&)' &(%!*&'' %>,' ""C:!(&'' (&6' %>,' >:(D!(&'' *-'G>*B'G,' '>("" %:,(% B*:,' -.""C' !&' (' '.?L ',I.,&% D>(A%,:' '%**6' ("!F,' (% %>(% %!B,' !&' &,,6' *-' '.?;.)(%!*& >,'%:!?,'' *-'!&"(&6' >:(D,''>*G,6'%>,B','E,'' '%!"" B*:,' *?'%!&(%,'%>(&' %>,' ""C:!(&'' (&6' -(:'-:*B' '.?J

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' >,' "*D("!%C' T !&' G>!D>' %>,' >!'' '*&' # .,%*&!.'' #% ' OS9' (&6' ,''!' >*&*.:' %>,')*6' !*&C'*' U' (&6' G>!D>' :('' .'' %**F' -:*B' %>,B' (&6')(E,' %*' %>,' 6:C'!(&" # !*' "!' RM9' !'' D,:%(!&"C' %>,' '(B,') $ ' *!& ' "+# ' !&' G>!D>' ",@(&6,:' '(D:!-!D,6' (&6'%>,'-(%>,:'*-' .).'%.'' +# ' *$ ' $+ $&!' - !+ !$' G + &# ' 4#+$ $&' ('F,6' %>,'*:(D"," :,'A,D%!&) >!'' '*&' # .,%*&!.'' #% ' OS9' (&6' G>!D>' ,:*6*%.'' (":,(6C' B,&%!*&'' #!!' H' D*BA(:,' .:!A!6,'' $+' /R1N9' (" (&'*:(D."(:' '>:!&,' A"(D,6' .&6,:' %>,' A:*%,D%!*&' *-' %>,' ,''!' .:%(!&"C' !%' !'' %*' >,' '*.)>%' &*:%>L G(:6'' *-' >*6*A,'H !%' >(' &*%' C,%' ?,,&' 6!'D*E,:,6

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RO (( )))

%>,&D,'%*'%>,' ,',:'('',E,:,' "*G'?,-,""'%>,' *B(&''&*%'
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%>,'%>!:%!,%>'C,(:'*-'>!''(),'(&6'!&'%>,'-.""'D*&'D!*.'&,''*-'
>!''E!)*.:'(&6'*-'>!''.DD,'',''"*&)'(&6'6,,A"C'"(B,&%,6'
?C'>!''(6>,:,&%''(&6'%>,'G>*",'A,*A",KA,:>(A''%*'?,'
A:*&*.&D,6'-*:%.&(%,'?,D(.',%>,')*6'')':(&%,6'%*'>!B'%*'
6,A(:%-:*B'"!-,'C*.&)'(&6'%*','D(A,'%>,'6!'!"".'!*&''(&6'
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&%!&.L (&D,'-'%>,' G(:'?C' !?,:!.' &'%>,'D*.:',*-'%>!&)''('(G>*",'%>,'6,(%>'*-'%>,' (?",'),&,:("B(6,K("B!)>%'?,' ,@A,D%,6K&*'D>(&),' !''?:*%>,:' !?,:!.''(::!E,6',(:"C',&*.)>'&*%'B,:,"C'%*' D"*',' >!',C,''?.%'("'*'G!%>'>!''-!:B'>(&6'%*'?:!&)'%>,' (:BC'?(DF'(&6'%*'D(::C'*&'%>,'D*&I.,'%'*-' ,:B(&C' ,'D*BB(&6,6'%>,:,' 6.:!&)'%>,'%G*'-*""*G!&)'C,(:''

0'NJ #NS1'NSN9'!&'%>,'D*.:',*-'G>!D>'%>,:,'G,:,'&*'D*&L -"!D%''*&'('"(:),:'D("," ?.%'%>,' *B(&'%:**A''>*G,6' %>,B','E,'-(:'(&6'G!6,'?,%G,,&'%>,' >!&,'(&6' "?,'(&6

' >(%'%>,'-(""*-' :.'.''%**F'A"(D,' !&'%>,':,)!*&'*-'%>,' ((",'G,'B(C'?,' (""*G,6'6'*''',F'!%'!&'%>,':,)!*&'*-'%>,' ,',:' >,'6,(6'?*6C'G('''%>,&'D*&E,C,6'%*' %>,'G!&%,:3D(BA'# !*'E'Rg'(&6'%>,:,' ?.:&%H'%>!''A*%G('':,)(:6,6'(DD*:6!&)' %*' *B(&'.'(),'("'*'(''%>,'A"(D,'*-' ?.:!("' %>*.)>'%>,'6,A*'!%!&)'*-'%>,' ('>,'' %**F'A"(D,'!&' *B,'(&6'%*' %>!'' !'' %*'?,' :,-,::,6'%>,'- " ! #' &# # #' G!%>'%>,' (&&.("*?',I.!,'' # .,%*&'2'+F' :*?(?"C'G,'>(E,'%*' ',,F'-*:'%>!''A"(D,'(% ,%,:(' >,&' (''(%,:' (.%>*:' # .%:*A!.'' E!!' /Z9' 'A,(F'' *-'%>,' "# && '*-' :.'.'' (% ,&%Q'%>!'' !'' 6*.?%",'''' &*%' %>,' %*B?'?.%'%>,',"',G>,:,' B,&%!*&,6' :*A(,.B'#"*:.''!!'Z[P'D!+ ! :' # ' * ' $&' " %" #'6#$"4!' '$4 &# ' &# # # ' "' & *!$' 4&@' $G+K#&F

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' >,' * !$ 4 # ' D*&'%:.D%,6 ?C :.'.'' "' "&$!#" ' # (D!%.'' " " ! M19 (&6 %>, K* * *' =' Y6::*!'' !*? ! M* *8 8 ** (''*D!(%,6 G!%>' "!'*'# !*''!E'ZZ9 (:,'A:*?(?"C !6,&%!D(" (&6 %>, 'A,D!(" A*'!%!*& *-% %>,'D(&%*&'*-'%>,' (%%!(D! !'' ,E!6,&%"C D*&&,D%,6 G!%>' %>,' D*&'%:.D%!*& *-*)*&%!(D.B T >(% %>,'T'-*:% (% %>,'D*&-". ,&D,' *-% >,' .A!(' (&6 %>, ,"!'*& U !& !*'"!E'ZZ'!"!6,&%!D("G!%>%>,'*-%,&,:' B,&%!*&,6 "!'*' (&6 %>!'' B.'% ?,' '*.)>% *& %>,'.AA,:' !AA, '!'' .?;,D% %*' &* 6*.?%H (&6 %>(% %>, *B(& G!&%,:JD(BA (% %>,' '*.:D,'' *-' %>,' !AA,' N!4'+!*#&)#* !$' ,"",!.'' !!' R[M9' %>,'*&"C'*&,' *-'%>,'F!&6' '*' -(:' (" G,'F&*G' *& ,:B(&'):*.&6'!'' %*' ?,'' *.)>% ;.'% %>,:,' !'' (% ",('% E,:C' A:*?(?",' >(% %>, %G*' *B(& :*(6'' :.&&!&)' ("*&)' %>,' !AA, (&6' %>,!:' -*:%!-!,6 A"(D," *-?!E*.(D'",6'(% ",('% (" -(:' ('%>,':,)!*& *-' !AA'%(6% %>,':,',(:D>," *-' *"Q,:B(&& !& A(:L %!D."(:' >(E,' '>*G& >,' .AA,:' !AA,'>('' *&"C'*&,'D*&-".,&% *-' &*%,' %>,' "B,' (&6' (' %>,'E!"")(),'*-' "',& "!,'' &*% -(:' -:*B' G>,:,' %>,' "B, -("" '!&%*' %>,' !AA, '*B,'G,!)>% B(C ?,' >,:,' (''!)&,6' %*' %>,' '!B!"(:!%C' *-' &(B,' *'%>,'E!,G''.AA*:%,6'(B*&)' *%>,:'?C D>B!6%'G>!D>'A"(D,'' "!'*' (% %>,'D*&-",&D,' *-' %>,' ",&&,'#(&6' !,',9G!%>' %>,' !AA, '%>,' D>!,-' *?L ;,D%!*&' !'' %>(% %>,' D(BA !4'+!*#&)#* !$B.'% %>,&'>(E,'?,,&'6!--,:,&% -:*B' "!'*'(&6' !&'),&,:(" %>!'' A*!&% "!,'' %**'-(:'-:*B'%>,'!&,'*-'%>,' ,',:' G>!","-:*B' "',& %>,' :*.%,' ",(6'' 6!:,D%"C'%>:*.)>' %>,' 6:,&'6,-!","!&%*' %>,' ,::('E(",C' D>B!6%'G>*'6*,'' &*% (6>,:,' %*' %>,' !6,&%!-!D(%!*&' *-' "!'*' (&6' "',& ':,B(:F''),&,:("C' A $&! +-$',$& +- &'# ' $+-'#"4' &$ &-# B#"4$' @@' A' RMO9' %>(% %>,' >,!)>%'' *-' ,',:' #&*% -(:' -:*B' "',&9' (&6'),&,:("C' %>,' ",-% B(:)!& *-' %>,' E("",C' *-' %>,' "B,' (:,' %>, D,&%:,' *-' (' ,B!D!:D",'-*:B,6' ?C %>,' B*.&%(!&'' !&' -:*&% (&6' %>!'' >!)>J "C!&) 6:C :,)!*& ("'*G!&)' (& ,@(D% "**FJ*.% ('' -(:' (''' %>,' B*.&%(!&'' G>!D>' D*E,:'' %>,' G>*"," D*.&%:C' *-' %>,' !AA,' (&6' !'' !%',"-' D*E,:,6' !& -:*&% ?C' %>,' "B,' !'' G,"" (6(A%,6'-*:' %>,' '%(:%!&)JA*!&% *-' (' B(:D>' %*G(:6'' %>,' ,',:

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,@A,6!%!*&'' A:*A,:"C' '*' D("",6' G,:,' .&6,:%(F,&' .&!-*:B"C' !&' %>,' D*&I.,:,6' D*.&%:C' (' (' :."," &,(:' "!'*

>,' *B(&'' >*G,E,:' 6!6' &*%' B(F,' B,:,' B!"!%(:C' (::(&),B,&%'' !&' %>,' &,G"C' (DI.!:,6' 6*B(!&' >,' ,:L B(&'' G,:,' .:),6' "!F,' *%>,:' A:*E!&D!("'' %*' >(E,' "(G' (6B!&!'%,:,6' %*' %>,B' ?C' %>,' *B(&')*E,:&*:' (&6' %>,' '.BB,:' ,@A,6!%!*&'' *-' %>,'),&,:("):(6.(""C' 6,E,"*A,6' !&%*' %>,' .'.(" ;.6!D!(" D!:D.!%'' *-' %>,')*E,:&*:' >,' (DD.'(%!*&' (&6' 6,-,&D,' *-' %>,' (DD.',6' %**F' A"(D,' !&' %>,' (%!&' "(&).(),H %>,' *!%%(&' (6E*D(%,'' (&6' ",)(" ('',''*:'' ?,)(&' *&' %>,' :!)>%' (''*&' %>,'",-%' '!6,'*-' %>,' >!&,' %>,!:' *A,:(%!*&'' '*:,"C'-,"%',E,:CG>,:,'?.%' >,:,'6,,A"C',@('A,:L (%!&)' %*' %>,' ?(:?(:!(&'' G>*' G,:,' .&(DD.'%*B,6' %*' '.D>' %>!&)'' .D>' G('' "(DF!&)' %*' %>,' -."" D(::C!&)' *.%' *-' %>,' A:*E!&D!(" *:)(&!'(%!*&' H (-*:B(" ('',''B,&%' *-' %(@(L %!*&' (:,)."(%,6'",EC'-*:' %>,' *B(&' (:BC' G,:,' &*%' C,%' %>*.)>%' *-' .%' (' %>,' &,G' D(&%*&(" .&!*&' >(6' ;.'%' ?,,&' !&'%!%.%,6' !&' (." !&' D*&&,D%!*&' G!%>' %>,' 6!E!&,' (6*:(%!*&' *-' %>,' B*&(:D>' %>,:,' !&%:*6.D,6' (' '!B!"(:' (::(&),B,&%' G(' B(6,' ("'*' !&' %>,' &,G' ,:B(&C' >,&' :.'.'' D*&',D:(%,6' -*:' (." %>,' ("%(:' *-' .).'%.'' (%' C*&'' %>,' ,:B(&'' "('%' ',%%",6' *&' %>,' ",-% ?(&F' *-' %>,' >!&,' %>,' ?!!' G,:,' &*%' :,D,!E,6' !&%*' %>!'' .&!*&H ?.% !&' %>,!:' D>!,-' A"(D,' G>!D>' (' :,)(:6'' A*'!%!*&' G(' -*:' ,:B(&C' &,(:"C' G>(%' C*&'' G(' -*:' %>,' %>:,' (."'' (' '!B!"(:' ("%(:' -*:' %>,' ,:B(&!D' D(&%*&'' G(' ,:,D%,6' %>,' A:!,'%>**6' *-' G>!D>' G('' !&' %>,' C,(:' O' (6B!&!'%,:,6' ?C' %>,' C*.&)' >,:.'D(&' A:!&D,' ,)!B.&6.'' '*&' *-' ,),'%,'

*"!%!D(" 6!--,:,&D,'' >*G,E,:' !&' %>,' !BA,:!(" -(B!"C' ?:*F,' 6*G&' *:' !&%,::.A%,6' %>,' -.'"" B!"!%(:C' '.DD,'' >,' 6!'D*:6' ?,%G,,&' !?,:!.'' (&6' >!'' '%,A-(%>,:' ",6' %*' %>,' -*:B,:',!)&!&)' %>,' D*BB(&6' !&' %>,' ?,)!&&!&)' *-' NSOJ >,' 6C&('%!D' !&%,:,'%' 6!6' &*%' (""*G' D*BA:,>,&'!E,' B!"!%(:C' *A,:(%!*&'' %*' ?,' ,&%:.'%,6' %*' *%>,:'),&,:("'' %>(&' A:!&D,'' *-' %>,' !BA,:!(" >*.','H (&6' (-%,:' %>,' 6,(%>' *-'):!AA(' (&6' :.'.'' (&6' %>,' :,%!:,B,&%' *-' !?,:!.'' %>,:,' G,:,' &*' (?","),&,:("'' !&' %>(%' >*.',' ,:%(!&"C' !&' %>,' %,&' C,(:'' G>,&')*E,:&*:'' G!%>' %>,' *:6!&(:C' A*G,:'' ?*:,' 'G(C' !&' ""C:!D B' (&6' !&' ,:B(&C'%>,' B!"!%(:C' *A,:(%!*&'

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,%!:,B,&%' *-' !?,:!.'' -:*B' %>,' D>!,-' D*BL B(&6

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%>,:,B(C&*% >(E, .&6,:)*&, '*D*BA",%,(&!&%,::.AL %!*& (%>,C (AA,(:%* .% %*> >(E,6*&, ',,!&) %>(% %:(6!%!*& G!%>!%'D*.:%"C D*"*.:!&) 6*,'&*%!&!%':,A*:% 6,(" *.% ,I.(" B,('.:,%*D(BA(!)&'D*&6.D%,6 ?C (&6 %*%>*',D*&6.D%,6 G!%>*.% A:!&D,'H ?.% %>,(::,'% "(!6 *&%>,B G(' .&B!'%(F(?",(&6%>!'!%',"-G(' (':,%:*):,'L '!*& >,&*?(:?.' G>*!& D*&',I.,&D,*-'>!'("")(&D, ?C B(::!(),G!%>%>, !BA,:!(" >*.',K >!' G!-,G(' %>, 6(.)>%,:*-(' '!'%,:*-.).'%.'K >(6):,(%,:-:,,6*B *-(D%!*& %>(& *%>,:*--!D,:' (&6G>*!& >!' ""C:!(&)*E,:&*:'>!A >(6 D:*'',6 %>, "?,G!%>*.% ,&D*.&%,:!&) :,'!'%(&D,(-%,:G(:6' (')*E,:&*:*-, :B(&C:,(A,6&*" (.:,"' %>,:, *% B,:,"C %>, ,@('A,:(%!*& ?.% %>, D*.:(), ("'*'*-'%>, ,:B(&' G(' ()(!& :!'!&) (&6 G>*' !& >!' ""C:!(&)*E,:&*:'>!A >(6 D:*'',6 %>, "?,G!%>*.% ,&D*.&%,:!&) :,'!'%(&D,(-%,:G(:6' (')*E,:&*:*-, :B(&C:,(A,6&* "(.:,"' %>,:, *% B,:,"C %>, ,@('A,:(%!*& ?.% %>, D*.:(), ("'*'*-'%>, ,:B(&' G(' ()(!& :!'!&) (&6 !& %>, C,(:R %>,D*.&%:C (AA,(:' ()(!& !& :,E*"% %>, >,:.'D! (&6 %>, >(.D! .&6,:(:B' ,(&G>!",(%' %>, !BA,:!(" D*.:% 6,(%>(6 !&%,:A*',6 (&6 %>,:,B*E(" *-%>,C*.&) '*&" *-.).'%.' >(6 :,D*&D!",6 %>,"(%%,:(&6 !?,:!.'

!?,:!.' *&D,'B*:,' D*BB(&6,:' !&D>!,-

D(:D,"C G(' %>!' :,D*&D!"!(%!*&',(",6 ?C >!' (6*A%!*& (' (' '*& (&6 A:*D"(!B,6 #S9 G>,& !?,:!.' :,'.B,6 %>, G*:F G>,:, !% >(6 ?,,& ?:*F,& *--(&6 *&D,B*:, !& %>!' (&6 !& %>, %G*-*""*G!&)'.BB,:' #MJ19 ",6 %>, (:B!,' *E,:%>, >!&, %G(' (':,A,%!%!*& *-(&6 (& (6E(&D, .A*& %>, ,(:"!,:D(BA(!)&' >, >,:.'D! G,:, :*.)>% ?(DF %*(""),)!(&D, !& %>, -!:'% D(BA(!)& %>, >(.D! !& %>, ',D*&6 H %>, (&&,&,-(%,' (6;*!&!&) %>, (%(E! (&6 &*% !&-,:!*:' !& ?:(E,:C %>, :.D%,:!' ,%%",6 & %>, :,)!*& *-%>, '*.:D,' *-%>, !AA, (&6 *& %>, B' (&6 E(:!*.' *%>,:D(&%*&' '.?B!%%,6 (' 6!6 ("'* >, A*G,:-.' (&)*?(:6!' >,:, -!:'% B,&%!*&,6 6G,""!&) !% %>(% %!B, ?,%G,,& %>, ,',:(&6 "?,J >, -!:'% P(BA(!)&",6 *E,:%>, ,',:!&%*%>, !&%,:!*:H !& %>, ',D*&6 (% %>, "?, !%',"-%>, *B(& ",)!*&' D*&-:*&%,6 %>, ,:B(&!D),&,:(" ,EC *& %>, *%>,:?(&F :*B %>, C,(:S %* M %>, *B(&(:BC %**F .A(AA(:,&%"C -*: %>, -!:'% %!B,'!%' G!&%,:I.(:%,:'*& ,:B(&'*!" (% "!'* "" %>!' G(' (%%(!&,6 G!%>*.% (&C D*&'!6,:(?",'D*&-"!D%'H %>,'D!:D.B'A,D% D*&6.D% *-%>,'G(:6!6 &*% ?:,(F:,'!'%L (&D,'?.% B(6,'!% !BA*''!?",' >!'),&,:(" (!B,6 &*%

(( )))E!&

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('!)&,6 %* %>,B '%>, *B(&)*E,:&*:'*& (:D*B(&!(&
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?,D(B,'.?;,D% %* %>, *B(&' ,6!6 &*% '.?B!% %*
%>,B ?.% >, ?*:, ("% %>,', *DD.::,&D,' G!%>*.% !&%,:L
:.A%!&) *& %>(% (DD*.&% >!' -:!,&6"C :,"(%!*&' G!%> %>,
B(&' C %>!' D,:%(!&"C &% B()&(&!B*.' (&6 'D(:D,
,E,&' '* B.D> (' A:.6,&% A*"!DC '>, >(6)(!&,6 %>!' B.D>
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'.DD,''-.% ,:B(&!D D(BA(!)&' !& %>, C,(:' S (&6 M >!'
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K %>, *B(& (:B!,' (6E(&D,6 ()(!&'% %>, *>,B!(&
B*.&%(!&JD!:D",H (!.' ,&%!.' (%.:&!&.'' (6E(&D,6 .A
%>, (!& D",(:!&) %>, 6,&',-*:,'%' -:*B A,''(:% %*
%>, !D>%,"),?!:),G!%> (@, (&6 -!:,< G>!", !?,:!.' !&
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",)!*&' >(6 ,&D(BA,6 6.:!&) %>, G!&%,:*-' %>, C,(:' MJ1
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&.B?,:'* '.A,:!*: (' ("B*'% %* 6*.?", %>(% *-% %>,!:
AA&,&%' G>*', -!)>%!&) -*:D,'G(' ,'%!B(%,6 (% N[[[[
!&-(&%:C (&6 S[[[>*:',B,& >,' D(.%!*.' '%:(%,)C *-
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,&'.:,6 '.DD,''G>,& (' '.66,& !&D!6,&% !&%,::.A%,6 %>,
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-% %>,' :,)!& *-% %>, (E,'-*:' ('>*:% %!B,' *?,C,6 %>,
*B(&)*E,:&*:'H ?.% %>,C ?*:,' %>, &,G :.",' G!%> (&
,E,:!&D:,('!&)):.6), (?*E,' ("* *& (DD*.&% *-% %>,'%(@,''
%* G>!D>' %>,C G,:,' .&(DD.'%*B,6 (&6 G>!D>' G,:,' :,",&%L
",''"C ,@(D%,6 >,& !?,:!.' '.?',I.,&%"C ('F,6 *&,
-% %>,', (6,:' (' % %>,'):*.&6'*-% %>,' :,E*"% >, (&'G,:,6
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,E,:%>,",''ʻ%>,ʻG*:Fʻ*-ʻ%>,ʻG(:ʻG('ʻ&*%ʻ,('Cʻ Ḥ >,:,ʻ ('ʻ,E,:CG>,:,ʻ%>,ʻ:,&,G,6ʻ*E,:%>:*Gʻ*-ʻ%>,ʻ'.?;,D%'ʻG('ʻ B*:,ʻ"(?*:!*.'ʻ%>(&ʻ%>,ʻ'.?;.)(%!*&ʻ!%','-ʻ ,E,:ʻ!&ʻ%>,ʻ .).'%(&ʻA,:!*6ʻ>(6ʻ'.D>ʻ('?*6Cʻ*-ʻ%:**A'ʻ?,,&ʻ.&!%,6ʻ .&6,:ʻ%>,ʻ'(B,ʻD*BB(&6Ḥ (":,(6Cʻ!&ʻ%>,ʻ-!:'%ʻC,(:ʻ*-ʻ %>,ʻG(:ʻ%>,ʻ(:BCʻ*-ʻ !?,:!.'ʻD*&'!'%,6ʻ*-ʻ%,&ʻ",)!*&'ʻ ("*&)ʻ G!%>ʻ%>,ʻD*::,'A*&6!&)ʻ(.@!"!(:Cʻ-*:D,'ʻ(&6ʻ!&ʻ (66!%!*&ʻ&.B,:*.'ʻE,%,:(&'ʻG>*ʻ>(6ʻ()(!&;*!&,6ʻ*-ʻ%>,!:ʻ *G&ʻ(DD*:6ʻ(&6ʻ*%>,:ʻE*".&%,,:'ʻ%*),%>,:ʻ(?*.%ʻ/R[[[[ʻ B,&Ḥ "(%,:ʻ >,ʻ >(6ʻ-!-%,,&ʻ ",)!*&'ʻ .&!%,6ʻ .&6,:ʻ >!"ʻ ?(&&,:'ʻ &ʻ%>,ʻ-!:'%ʻD(BA(!)&ʻ gʻ%>,ʻD*&%,'%ʻG('

ʻ -'G,ʻ (''.B,ʻ%>(%ʻ*-ʻ%>,ʻ%G,"E,ʻ -*:Bʻ%>,ʻ (:BCʻ%>,:,ʻ%>,ʻ ""C:!(&ʻ ",)!*&'ʻ G>*ʻ G,:,ʻ *&ʻ %>,ʻ B(:D>ʻ (:BCʻ*-ʻ !?,:!.'ʻ&.B?,:,6ʻ',E,&ʻ ()(!&'%ʻ (:*?*6..'ʻ# (D!%.''ʻ !!ʻ (&6ʻ%>,ʻ&.B?,:ʻ*-ʻ%,&ʻ# ,"",!.''ʻ!!ʻ S19ʻ (''B(&Cʻ ('ʻG,ʻ-!&6ʻ'**&ʻ(-%,:ʻ //Z9ʻ B(Cʻ -(!:"Cʻ?,ʻ:,-,::,6ʻ%*ʻ%>,ʻ !&ʻ ,:B(&Cʻ%>(%ʻ!'ʻ-!E,'G,&%ʻ* D*&%!&),&%''ʻ-:*Bʻ *,'!(ʻ(&6ʻ%("C

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(D!(&'G(:' ,%:!?.%!*&' -,''' ("'*' *&' %>,' (D!(&'' ?,C*&6' %>,' *- ,&%."' (&.?,' :*?(?"C'(%' %>!'' %!B,'(-%,:'%>,' ''C:!(&'G(:'G('' 6,D!6,6' !&'-(E*.:'*-' *B,' &(,.'' ,&%."."'',6' ('%:*&)' *B(&' (:BC' (D:*'' %>,' (&.?,':,(D>,6' ('' -(:' (''' %>,' (:!'.'' # (:*'D>9' (&6' ,BA>(%!D(''C' 6,-,(%,6' %>,' B' !&' %>,!:' *G&' D*.&%:C' G>!D>' G('' %>,&' -*:' %>,' -!:'%' %!B,' %:*66,&' ?C' (' *B(&' (:BC' !-%C' %>*.'(&6' D(A%!E,' (D!(&'' G,:,' B(6,'%*' ',%%",'!&' >:(D,

,&' *-'"(%,:'%!B,'' %,:B,6' %>,' T' (%*&!(&' G(:'U' *-'%>,' C,(:'' 1JO' %>,' B*'%' ',E,:,' G>!D>' *B,' >(6' %*' '.'%(!&' ()(!&'%' (&' ,@%,:&('' -*,' '!&D,' %>(%' *-' (&&!?("' %' !&-"!D%,6' ',E,:,' G*.&6'' *&' %>,' ''C:!(&' "(&6'H !&' %("C' %>,' ;*C' *E,:' %>,' E!D%*:C' G('' ?*.&6","'' G>,&' %>,' C*.&)' ,:B(&!D.'' ?:*.)>%' %>,' &,G'' *-' %>,' 6,D!'!E,'' '.DD,''' %*' %>,' D(A!%("' >,' ,@."%(%!*&' 6!6' &*%' "('%' "*&)H ("B*'%' '!B."%(&,*.'"C' G!%>' %>,' &,G'' *-' %>!'' '.DD,''' %>,:,' D(B,' %*' *B,' (DD*.&%'' *-' (' 6,-,(%' '.D>' ('' :,(D>,6' %>,' ,(:'' *-' .).'%.'' ?.%' *&D,' !&' >!'' :,!)&' *-' -!-%C' C,(:'K (' 6,-,(%' G>!D>' G('' '%!''' B*:,' '!)&!-!D(&%' !&' !%'' D*&',I.,&D,'' %>(&' !&' !%',"-

,:B(&!D :!'!&) >,' '%(%,' *-' %>!&)'' !&' %>,' A:*E!&D,' *-' ,:B(&C' >('' ?,,&' (":,(6C' ',%' -*:%>' >,' :,D*!'' G>!D>' -*'''*G'' *&' (&C' -*:,!)&' :.",' G!%>' %>,' !&,E!%(?",&,'' *-' (' &(%.:('' ,E,&%' (&6' G>!D>' >(6' ;.'%' ',%' !&' !&' %>,' ''C:!(&' "(&6' G('' !&' A:,A(:(%!*&' ("'*' (B*&)' %>,' D(&%*&'' *-' %>,' B!66',' >!&,' >,' :,B&(&%'' *-' %>,' %:!?,'' ',%%",6' !B B,6!(%,"C' *&' %>,' >!&,' G,:,' !&6,,6' I.!%,' 6!'D*.:(),6H ?.%' %>*'',' 6G,''!&)' -(:%>,:' ?(DF' ,'A,D!(''C' %>,' >,:.'D!' >(%%!' :.D%,:!' (:'!' G,:,' ",''' !&;.:!*.'"C' (--,D%,6' (&6' ?C' &*' B,(&'

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%>,:, ! &* %:(D, *- (&C %>:,(6 *- D*&&,D%!*& ?,%G,,& %>, %G* '!B!"(: (&6 ("B*'% D*&%,BA*:(:C !&'.::,D%!*&'H >(6 '.D> (D*&&,D%!*& '.?'!'%,6 %>, ,:B(&' G*."6 >(:6"C >(E, G(!%,6 %* '%:!F, %!"" %>, (&&*&!(& :!'!&) >(6 ?,,& *E,:A*G,:,6 (&6 %>, E,:C "('% '%:*&)>*"6'! & ("B(%!(G,:, '.::,&6,:!&) :B!&!.' G(' %>, ?:(E, (&6 '>:,G6 (&6 (?*E,' ("" %>!&)' -*:%.&(%, ", (6,:! &% >, D*&-"!D% *-6,'A(!: *E,: %>, "*'% &(%!*&(" !&6,A,&6,&D,K &*%>!&)", ' ' ?.% ("'*& *%>!&) B*:,

(:.' %G(' B*:, %>, -(."% *- %>, *B(' %>(& %>, B,:!% *- %>, !&'.:),&%' !- %>, A"(& *- %>, "(%%,: '.DD,,6,6 * -(: D,:%(!&"C %>, ""C:!(& G(:>(6 (& ,-",D% *& ,:L B(&C >, (?",'),&,:(" (&6 %* ("" (AA,(:(&D,' ("'* %>, ,@A,:!,&D,6 %:**A' G,:, 6:(G& -:*B %>, >!&, %* %>, (&.?, >, ,:B(&!D (:BC G(' (AA(:,&%"C &*% 6!B!&!'>,6 ?.% %>,):,(%,'% A(:% *- !% D*&'!'%,6 *- &,G ",)!*&' -*:B,6 6.:!&) %>, G(: %!"" G*:', G(' !%' A*'!L %!*& (' %* ",(6,:' >,)*E,:&*: .?"!.'] .!&D%!"!.' (:.' G(' &* 6*.?% %>, >.'?(&6 *- (' &!,D, *- %>, ,BA,:*:' (&6 (' B(& *- !""J(DI.!:,6 ?.% A:!&D,"C G,("% (&6 *- A:!&D,"C (::*)(&D, ?.% !&,:% !& ?*6C (&6 *?%.', !& B!&6 (&6 G!%>*.% (&C B!"!%(:C)!-%' *:, ,@A,:!,&D,K *&, *-%>*', B(&C *B(&' !& >!)>' '%(%!*& G>* !& D*&L ', I.,&D, *- (& (6>,:,&D, %* %>, *"6 B!@%.:, *- (6B!&L !'%:(%!E, -.&D%!*&' G!%>% >*', *- >!)>,:D*B B(&6 G*:, %>,),&,:(" ' 'D(:- (-%,:% >, B*6," *- !D,:* ,F&,G &*% >*G %*'A(:,&*:C,% %*' ', %>:*.)>% >, &,G '.?;,D%'H *AA:,''!*& (&6 ,@(D%!*& G,:,A:(D%!',6 (' >(6 ?,,& %>, G*&% *- >!' (:"!,:)*E,:&*:'>!A *E,: %>, A(%!,&% C:!('H %>, >,(6I.(:%,:' 'G(:B,6 G!%>' (6E*D(%,' (&6 D"!,&%'H (&6 !&):(%,-." >.B!"!%C %>, D*&'A!:(%*:' ,'A,D!(""C :,D,!E,6 ;.6)B,&% (&6 ;.'%!D, (% >!' >(&6' G>!",'%>, &,% G('?,!&) 6:(G& B*:, (&6 B*:,'D"*',"C (:*.&6 %>, (::*)(&% A:(,%*:

' >, ,--!)C *- (:.'! ' '>*G& *&' (' D*AA,:' D*!& *- %>,' -:!D(& %*G& D>.""(' '%:.DF .&6,:' >!'' A:*D*&L '."(%,' *- -:!D(' !& %>,' C,(:' NSNJO' D' NJ1' # ' !!"",:' (&& ' 4$' !"+ .' $""$' 6#$' !!' A' SS' D*BA' A' 5R9' >,' ?(',' G>!D>' *&D,' '.AA*:%,6 %>, '%(%.,',:,D%,6 %*' >!B' ?C' %>,' %*G& *- ,:)(B.'' >(' ()(!& ?,,& ?:*.)>% %*' "!)>% ?C' %>,' ,@D(E(%!*&'' %>,:,H %>,' '.?'D:!A%!*& :.&'P 1' 77 ' I :!C. ;D:,!j &!(JY!*!' *!: !Y!*E <=).' ."!E' 4*' I*Ej' !! ' " #%' V, *j

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>,' A*'!%!*&' *-' %>,' ! '' G('' G>(%' G('' %>,&' %>,' &*:B("* &, ' >,:,' G,:,' (%' ",('%-!E,' ",)!*&'' !&' %>,' A:*L E!&D,' %G*' *-' G>!D>' >(6' %>,!:' G!&%,:JI.(:%,:'' (% *)*&J %!(D.B'%>:,,' !&' ,%,:(' *:' ,"',' !&' "!'* ' >,' "(%%,:'>(6' %(F,&' .A' %>,!:' '.BB,:',&D(BAB,&%' !&' %>,' C,(:' O' *&' %>,' ,',:' 3>,' &(%.:("* :*.%,' *-' D*BB.&!D(%!*&' -:*B' %>,' .AA,:' !AA,' %*' %>,' ,',:",(6'' *E,:' %>,' "*G' D>(!&' *-' >,!)>%'' *-' %>,' '&!&)' (&6' *-' %>,' !AA,' *:,'%' G>!D>' ',A(:(%,'' %>,' E("",C' *-' %>,' B'' -:*B' %>(%' *-' %>,' ,',:' %>:*.)>' %>,' *:,&' 6,-!",' !&%*' %>,' E("",C' *-' %>,' ,::(' G>!D>' -("'' !&%*' %>,' ,',:'(%' ,>B,'&*%' -(:'-:*B' !&6,&' ,:,' %>,:,-*:,' (AA:*@!B(%,"C' %>,' ",)!*&'' *-' (:.'' (% %>(%' %!B,' G,:,' ,&D(BA,6' '' (' B(%%,:' *-' D*.:',' %>!'' '.BB,:'D(BA' G(' D*&&,D%,6' G!%>' "!'*' %>,' ?('',' *-' %>,' *B(&' A*'!%!*&' *&' %>,' :!)>%' ?(&F' *-' %>,' >!&,' ?C' (' :*(6' '.AA"!,6' G!%>' 6,A*%'' >,')**6' ,('*&' *-' %>,' C,(:' D(B,' %*' !%'' D"*',' (&6' %>,C' G,:,' B(F!&)' :,(6C' -*:' %>,' :,%.:&' B(:D>' G>,&' %>,' &,G'' D(B,' %>(%' (' &,!)>?*.:!&)' D(&%*&' G('' !&' :,E*"%H (&6' (:.'':,'*"E,6' !&'%,(6' *-'",(6L !&)' ?(DF' %>,' (:BC' ?C' %>(%' 6,A*%J:*.%,' %*' %(F,' (' D!:D.!%' (&6' ?C' %>,' G(C' %*' ?:!&)' ?(DF' %>,' :,?,"'' %*' (",)!(&D, ' *' %>,C' ',%' *.%H %>,' (:BC' D*&'!'%,6' (-%,:' &.B,:*.'' 6,%(D>L B,&%'' *-' %>:,,' ",)!*&'' (&6' &!&,' 6!E!'!*&'' *-' %:**A'' *-' %>,' ,D*&6' D"('' ' %*),%>,:' (?*.%' R[[[[' B,& ' >,&' %>,

3 >,' :,A*:%' *-' !*' %>,' *&"C' *&,' G>!D>' >(&6'' 6*G&' %*' .'' (' '*&",G>(%' D*&&,D%,6' E!,G' *-' %>!'' D(%('%:*A>,' ,@A"(!&'' %>,' D*.:',' *-' !%' '.--!D!,&%'C' !-' G,' *&"C' %(F,'-.:%>,:' !&%*' (DD*.&% K G>(%' !*' D,:%(!&"C' 6*,'' &*%' ?:!&)' !&%*' A:*B!&,&D,'K'%>,'),&,:(" :,L "(%!*&' *-' %>,' '.BB,:' (&6' G!&%,:' D(BA'' (&6' %>,:.,?C' (&'G,:' %>,' I.,'L %!*&' ;.'%"C' A.%' ?C' (&F,' N $&%$.' +-+-$' !!!' R' RNM9' >*G' %>,' G>*",' (:BC' D*."6' >(E,' B(:D>,6' ()(!&'%' ("*D(" !&'.::,D%!*&' >,' &(::(%!E,' *-' "*:(' ?C' &*' B,(&'' :,'%'' *&' '*.:D,'' *:!)!&("C' 6!--,:,&%' (' %>(%' 'D>*"(:' ('.B,'' ?.% '!BA"C' *&' %>,' 6:(B(%!D' (DD.B."(%!*&' *-' B*%!E,'' -*:' (D%!*&' '.D>' (" !" D>(:(D%,:!'%!D' *-' ("" >!'L %*:!(&'' *-' %>!'' %CA,' >,' A,(D,-.'' 6!'A,&'!&)' *-' ;.'%!D,' ?C' ċ (:.'' (&6 %>,' '%*:B!&)' *-' %>,' D(BA' (:,' ?*%>' F&*G&' %*' %>,' ?,%%,:' %:(6!%!*&' (&6' %>(%' !&' %>,!:' D(.'(" D*&&,D%!*&' >,' :!6!D."*.'' :,A:,',&%(%!*&' *-' %>,' ,:L B(&'?:,(F!&)'!&' (%' ("" %>,')(%,'' !&%*' %>,' D(BA' G>!%,' (:.'' !'' '!%%!&)' *&' %>,' ;.6)B,&%J',(%' (&6' %>,' >,:("6' !'' '.BB*&!&)' %>,' A(:%!,'' ?,-*:,' >!B' !'' &*%' %:(6!%!*&' ?.%' (' A!D%.:,' B(&.-(DL %.:,6'-:*B' !%' >(%' %>!'' !'' !&' .%%,:' (&%()*&!' B' %*' %>,' 6,'D:!A%!*&' ?C' (D!%.'' *-' %>,' %>:,,'?!E*.(D'' (" G,"" (" %*' '*.&6':,('*&' !'' *?E!*.' ' >,' &*:B(" '%:,&)%>' *-'%>,' %>:,,' ! !$' (&6' %>,' '!@' + - &$' !'' &*%' %*' ?,' D("D."(%,6',@(D%"C' !&('B.D>' (" (B*&)' %>,B' %>,:,' B(C'>(E,' ?,,&'6*.?","' 6!E!L '!*&"A ! !$9H ?.%%>,' (:BC' D(&&*% >(E,' &.B?,:,6' B.D>' *E,:' R[[[[' B,&' &' %>,' *%>,:' >(&6' %>,:,' (AJ

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!?,:!.'' E,&%.:,6' %*' !&D:,(',' '%!"'' -.:%>,:' %>,' ,@A,&',' *-'
%>,' (:BC' ,' B(C' ?"(B,' %>,B' -*:' &*%' 6*!&)' '*' >,'
A(:("C'!&)' 6*.?",' ?"*G' *-' %>,' ""C:!(&' (&6' %>,' ,:B(&!D'
!&'.::,D%!*&'' G!%>' %>,!:'):(E,' 6!'('%,:'' %>,'):,(%' (),J(&6'
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%(F!&)' (&6' (?*E,' ('' (&C' 6,E!(%!*&' -:*B' %>,' A*"!DC' *-'
.).'%.'' 6*.?%",''' D*J*A,:(%,6' %*' !&6.D,'%>!'' :,'.""%' (&6'
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%>,' "*'%' ,:B(&C' G!%>' %>,'>,"A' *-' %>,' %G*' ,:B(&' D(&L
%*&'' *&' %>,' ",-%' *-' %>,' >!&,' (&6' !&' %>,' (B?!).*.''
(&6' .&D,:%(!&' G*:6'' G!%>' G>!D>' .).'%.'' >!B',"-' !&' >!''
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*B(&' G,' 6!'D,:&' >*G' A,:A",@,6' G('' %>,' (%%!%.6,' *-'%>,'
)*E,:&B,&%' %*G(:6'' A.?"!D' *A!&!*&' !&' %>!'' B(%%,:' >,'
):('A!&)' (%' %>,'-:*&%!,:'*-'%>,' "?,' G('' (' B!)>%C' A,:>(A''
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6!6' &*%'),&,:(""C' '*(:' '*' >!)>K *&"C' (-%,:' C,(:'' *-'>,'!%(L
%!*&' (&6' 6*.?%",''' &*%' G!%>*.%' %>,' 6,%,:B!&!&)' !&-".,&D,'
-'%>,' C.&),:' '%,A'*&' G>*' G('' !&' D"*',''%' !&%,:D*.:',''
G!%>' >!B' .%' %*' :,%:(D,'%**' ?*"6' (' '%,A' !'' ('' (' :.",'
&*%' (' B,&6!&)' *-' %>,' B!'%(F,' ?.%' (' ',D*&6' B!'%(F,'
>,' B*&(:D>C' >(6' &,,6' *-'G(:"!F,'>*&*.:'.&'%(!&,6' (&6'
-'.&D&6!%!*&("' G(:"!F,'' '.DD,'''' !&' I.!%,' (&*%>,:' G(C' %>(&'
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&.B?,:'' /N' /0' (&6' /OK &,E,:'-!"",6' .A' '!&D,' %>,' ?(%%",

>*A, B.'6*.?%","> (E, A('',6%:*.)>%, B!&6'*-%>,?,'%%(%(D,:%(!&.&!*&*-%,&(%!*&G*."6(DD:.,-:*B%>,)"*:!*.'E!D%*:C*-%>, >,:.'D!(&6%>,!:("!,'(&6-:*B'%>,:,%!:!&)*-%>,,&,BC!&%>,G,'%('!&%>,'*.%> ,:>(A'!&%>,',E,:C D:!','%>,-,,"!&)*-.&!%C B(C>(E,6(G&,6*&%>, (@*&'(&6 .,?!(&'-*:B,:"C D*&-:*&%!&)',(D>*%>,:('':(&),:' >,-(D%(%>(%%>, (@*&'',&%-:*B%>,?(%%",J-!,"6%>,>,(6*-(:.'%*%>,F!&)*-%>, .,?!(&' B(C?,&*%>!&)?.%%>,'(E(),@A:,''!*&*-%>,%>*.)>%%>(%%>,>*.:>(6D*B,-*:("",:B(&'%*%>:*G%>,B',"E,'!&;*!&%*&',%.A*&%>, *B(&,BA!:,(&6%>.'%*',D.:,%>,-:*&%!,:(&6%>,-:,,6*B*-%>,!:"(&6('%>,C D*."6("*&,?,',D.:,6?C'%:!F!&)6*G&%>,>,:,6!%(:C-*,!&>!'* &>*B, .%%>,D."%.:,6B(&(&6%>,A*"!%!D F!&)(DD,A%,6%>,)!-%*-%>,!&'.:),&%'*&"C!&*:6,:%*-*:G(:6%>,>,(6%*%>,,BA,:*: .).'%.'-*:?.:!("H>,6!6&*%>!&)-*:?.%("'*&*%>!&)()(!&'%%>, *B(&'(&6A,:',E,:,6.&'>(F,&!&>!'&,.%:("!%C BB,6!(%,"C(-%,:%>,6,(%>*-.).'%.'%>,:,G,:,-,(:'(% *B,*-%>, (:D*B(&!!&E(6!&)(,%!(?.%(AA(:,&%"C G!%>*.%D(.',H(&6G>,& ,:J B(&!D.'%>,:,.A*&:,'.B,6%>, *--,&'!E, ()(!&'%%>, ,:B(&'-:*B%>, >!&,%>,B!)>%C F!&)*-%>, (:D*L B(&!"**F,6*&!&(D%!E, >!'A*"!DC*-!&,'',*:*-D*G(:6!D,6.)!%'*G&):(E,(B!6'%('(,:B(&!D G*:"6-!,:D,"C,@D!%,6(&6 6:.&F G!%>A(%:!*%!D'.DD,'','(&6>*A,'' >,B*:,:,B*%, .,?!(&%:!?,'?.%"**',"C D*&L &,D%,6G!%>%>,,BA!:,%>, ,B&*&,' (&)*?(:6!(&6*%>*&,''6,D"(:,6*--c-:*B%>,F!&)(&6B(6,D*BB*&D(.',G!%>%>, (@*&A(%:!*%'H!%!'*&%!BA:*?(?",%>(%%>,D*&'!6,:(?",-*:D,''G>!D>G,:,E!6,&%"C(%>,,6!'A*'('*-: :B!&!.'(&6&).!*B,:.'!&%>,D*&-"!D%'G!%>, ,:J B(&!D.''-"*G,6%*>,B!&):,(%A(:%-:*B%>,',I.(:%,:' **&(-%,:G(:6''G>,&%>, *B(&(%%(DF G('.6L 6,&"C?:*F,&*--%>,A(%:!*%'%.:&,6#/N9%*('(!(":*J ?*6..'A,:>(A'%*('(!(%>,F!&)"C*--!D,!&),&,:("(%",('%('%>,"(%%,:(6B!&!'%,:,6!%*&%>, *B(&B*6,"

>,''%(%,B,&%*-(D!%.'A """ *-%>,':,A.?"!D(&'()(!&'%%>,'B*&J G 94%>(%%>!'G(''A:*A,:"C('G(: (:D>!'%''!'A:*?(?"C&*%-:,,'-:*B'(

1R (( ))) &

"*:6 (&6%>, F!&)*-%>, ,:B(&'K G>,%>,:G!->:,('*&*-
&*% (&6G>,%>,: !->,G!'>,6%>!' >, 6!6 &*%A,:>(A' G!'>
G>(% G(:!)>% G>*D(& '(C >, :,'."% G(' (D!E!" G(:
?,%G,,& >!B (&6%>,',:,A:,',&%(%!E,'*-A*A."(:-:,,6*B H
%G* C,(:' (-%,:%>, ?(&!'>B,&% *- (:*?*6..' >1 %**
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',&%!B,&%' &,(:%* >!' A,:'*& !'G!-, >.'&,"6((&6
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&,E,:',% ,C,' B(:D>,6 (% %>, %:!.BA>* - ,:B(&!D.
#R1%> (C /N9 (B*&) %>, *%>,: ,:B(&' *-:(&F !&
D>(!&'%*%>, (A!%*"H %>,*"6 ,),'%,' G(' -*:>!'-!6,"!%C
%*%>, *B(&' A:*E!6,6 G!%> (A"(D, *- >*&*.:G>,&D,
>, B!)>% "**F *& (% %>, A.?"!D ,&%:C *- >!' 6(.)>%,:(&6
>!'):(&6'*& >,C ("" 6!,6 G!%>!& %>, *B(&, BA!:,H
G!%> (:*?*6..' %>, G!-, (&6 '*& *- >!' (&%()*&!'% B,%
!& %>, ,@!", *- (E,&&(>,& !?,:!.' :,B(:F,6 (%
%>, :,D("" *- ,:B(&!D.' %>(% %>,:, G(' &*&,,6 %* G(),
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',"E,' %(F, D(:, %* 6* G>(% G(' :,I.!'!%, -*: *B, >,
F&,G >!' (6E,:'(:!,' H !& %>!' (% ("" ,E,&%' >!'%*:C >('
A:*&*.&D,6 >!B :!)>% .% %* %>, >!)>J'A!:!%,6 B(&
G>*' (% %>, (), *-' '!@J(&6J%G,&%C'>(6:,",(',6 >!' (@*&
>*B, -:*B %>, %("!(& -*:,!)& :.", G>* %>,:,(-%,:>(6
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-*: %>(% -:,,6*B :,)(!&,6 G>* >(6 '%(F,6 &*% B,:,"C
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%* %>!' B(& >!' A,*A",)(E, G>(% !% G(' !& %>,!: A*G,:
%*)!E, (& ,%,:&(" B*&.B,&% !& >,:*!D '*&)

D*)&(%, I.!%(&!(&'' *&' %>,' &*:%>' '!6,' *-' %>,' B*.&%(!&'' G>!D>' -(""' G!%>!&' %>,' '(B,' ,A*D>' (&6' %>,' "('%' *-' G>!D>'

RN' G(' E!D%*:!*.'"C' ,&6,6' !&' %>,' C,(:' NRN' B.'%' '%(&6' !& D*&&,D%!*&' G!%>' %>,',' ,E,&%'' &' %>,' :,*:)(&!'!&)' *-' %>,'

RN' (6B!&!'%:(%!E,' (::(&),B,&%'' !&' NRN' %>,' A,&!&'."(' G,&% %*' .).'%.'' ?,D(.',' %>,:,' G(''' (' A:*'A,D%' *-' ,@%,&'!E,' B!"!%(:C' *A,:(%!*&'' %>*.)>' %>,'*.%>,:&' %>!:6' *-' %>,' B*:,' :,B*%,' A:*E!&D,' %>,&D,-*:%>' &(B,6' -:*B' %>,' :!E,:' (,%!'' # .(6L ("I.!E!:9' G(''' '**&')!E,&' ?(DF' %*' %>,')*E,:&B,&%' *-' %>,' ',&(%,' ?C' -(:' %>,'):,(%,:' A*:%!*&' *-' %>,' A,&!&'."(' :,B(!&,6' D*&'%(&%"C' .&6,:' !BA,:!('' (6B!&!'%:(%!*&' !&D".6L !&)' %>,'):,(%,:' A(:%' *-' %>,' B*:,' :,B*%,' A:*E!&D,' .'!L %(&!(' (&6' (""(,D!(3' (&6' %>,' G>*"," *-' %>," (:),' &,(:,:' *&, BB,6!(%,"C' (-%,:' %>,' !&'%!%.%!*&' *-' %>,' &,G' '.A:,B,' D*&L %:*'' .).'%.'' :,'*:%,6' !&' A,:'*&' %*' A(!&' G!%>' (' E!,G' !&'

R1' RM' >!'' %G*' C,(:'' '%(C' #NR0' NRO9' %*' *:)(&!',' %>,' &,G' (6J nB!&!'%:(%!*&' (&6' %*' 6!:,D%' %>,' *DD.A(%!*&' *-' %>,' A*:%!*&' ' *-' %>,' D*.&%:C' &*%C,%' '.?;,D%' >!'' >,' 6!6' -:*B' (::(D*' (' !'' >,(6I.(:%,:'' (&6' !-,' G(''' (%' %>(%' %!B,' %>(%' %>,' ',(%' *-')*E,:&B,&%' *-' %>,' &,(:,:' A:*E!&D,' G(''' %:(&'-,::,6' -:*B' ,G' (:%>(),' %*' (::(D*' (-%,:' G>!D>' %*G&' %>!'' A:*E!&D,' !'' %>,&D,-*:%>' .'.(""C' &(B,6' >!","' !%' (AA,(:,6

ZO' RO' N/19' !&' NR1' ' ("E!'!.'' (?!-%.'

ZO' R1' #D*&'."!&' N/M9' (&6' !&' NRO' ,@' AJ'

RO' A.",!.'' #D*&'.'' !&' NRM93' >,' >!'J %*:!(&'' B,&%!*&' *&"C' %>,' E!D%*:C' (D>!,E,6' *E,:' %>,' ,::,%(&!' #&,(:' .CD,:6(' !&' %>,',('%,:&' C:,&,,'9' >C' (''E!&.'' # !*' @"E!!!' SR' H D*BA' ,"',!.'' !!' NO' (&6' %>,' D*!&' *-' (?!J &.'' G!%>' +!' DF>,"' E' R[Z9'

%' '' .).'%(' B,:!%(' !&' .'!J

RM' %(&!(' *&"C' ?,D(B,' (' D*"*&C' !&' NRO' # !*' "!!!' R19' (&6' %>!'' D(&&*%' G,"" >(E,' ?,,&' ",-%' *.%' *-' (DD*.&%' !&' %>,' "!'%' *-' %>,' A:*E!&D,'' !&' G>!D>' .).'L %.'' -*.&6,6' D*"*&!,'' N "' "+' 'A' //O' D*BA' A' RRR9' %>,'',A(:(%!*&' *-' .'!%(&!(' (&6' !'A(&!(' "%,:!*:' B.'% &*%' >(E,' %(F,&' A"(D,' %!"" (-%,:' %>,' (&%(?:!(&' G(: ' (""(,D!(' G(''' &*%' B,:,"C' *DD.L A!,6' -:*B' %>,' "%,:!*:' A:*E!&D,' ?.%' B.'%' '%!"" !&' %>,',(:"!,:' %!B,'*-' .).'L %.'' >(E,' ?,"*&),6' %*' .'!%(&!(';.'% (''' '%.:!(" ("'*' B.'% >(E,' ?,,&' (% -!:'% (%%(D>,6' %*'%>!'' A:*E!&D,' %>,:L G!',' %>,' &(::(%!E,' !&' !*' "!E' 5' !'' &*%' !&%,""!)!?",' H ' (:!'!.'' %>,' ?.!"6,:' *-' B,:!%(' !'' ,E!6,&%"C' %>,')*E,:&*:' *-' .'!%(&!(' ' .:&!.'' %>,')*E,:&*:' *-' %>,' (::(D*&,&'!'' !%>' %>!'' ():,,'' %>,' A(:("",'' :,A:,'&%(%!*&' !&' "*:(''!!' ZZ' -*:' %>,' > %!$+ "' *-' %>,' ' (:,'D,:%(!&"C' %>,' 2 A!C(! *"' G>*B' %*",BC' !!' 1' RO' (66.D,'' (B*&)' %>,' '%.:!(&' >,:,-*:,'):!AA(' !&' >!'' B,('.:,B,&%'' D*BL A:,>,&6'' .'!%(&!(' G!%>' '%.:!(' (&6' (""(,D!(' # "!&' -' !E' RR' //09' (&6' %:(?*' #!;!' S' R[' A' /119' 6,'!)&(%,'' %>,' (""(,D!' ('' -*:B,:"C' %,:B,6' .'!J %(&!' (:!(%!*&'' !&' %>,' 6,B(:D(%!*&' *-' %>,' A(&!'>' A:*E!&D,'' (:,' B,&L %!*&,6' ?C' %:(?A' !!!' S' /O' A' /11

&,D,''(:C*&%>,*&,>(&6>*%*:,B*E,%>,',(%*-(6L B!&!'%:(%!*&-:*B%>,D*('%%>,&,G D(A!%(*&%>,*%>,:>(&6D*B B(&6,6%>,:,)!*&*-%>, ?:*(&6%>,D*B B.L &!D(%!*&'G!%>%>,&*:%>JG,'%(&6%>, C:,&,,')(!&'% %>,'%.;:,'#!& %>,A:*E!&D,'*-'%.:!('(&6 ,*&9(&6 (?*E,('''%>, (&%(?:!#!& %>,('I.,D*.&%:C(&6%>, A:*E!&D,*-(&%(&6,:9G>**?'%!&(%,"C>,"6*.%!& %>,',B*.&%(!&'(&6*E,::(& %>,&,!)>?*.:!&) D(&%*&'('G(:L -(:,(%%,&6,6?C6!--!D.'%!,'(&6>,(EC"*'','G('A:*L "*&),6K G!%>!&%,::.A%!*&''G>!D>%>,*B(&'D(''',6 E!D%*:!,'K-*:,!)>%C,(:''%!'''(%",&)%>):!AA('.DD,,6,6 !& ?:,(F!&)6*G& %>,*A,&:,'!'%(&D,?C6,'%:*C!&)%>, B*.&%(!& %*G&'(&6%:(&'A"(&%!&)%>,!:!&>(?!%(&%'%*%>, E(''',C'

-('%>,',BA,:*: .).'%.''(C''-:*B>(!'%!B,%>,'D*('%*-%>,*D,(&-:*B (6!Q%*%>,B0*.%>*-%>,"?, *?,C,6%>,*B(&'%>,*?,6!,&D,'!& %>!''D*:&,:**-!% G('-(:-:*B E*".&%(:C(&6%!%%",%*?,%:.'%,6 (%%,:'G,:,'%!''' (AA(:,&%"C-(:-:*B>(E!&):,(D>,6('A:*A,:A(D!-!D(L %!*& !& &*:%>JG,'%,:& A(!& >,:,'!'%!''' B,&%!*& !& ,:*'%!B,'*-G(:J,@A,6!%!*&'() (!&'% %>,'%.:!(&' '%!''' D",(:,:%("','!''%*"6?C%>,'*DD.A(%!*& *-%>,'D*.&%:C('.).'%.'(::(&),6'!%' (''',D!('G('' ',A(:(%,6-:*B .'!%(&!('(&6.&!%,6G!%>%>,' (::(D*&,&'!(& A:*E!&D,'%?D*&D,&%:(%,' !& *&,'>(&6%>,'D>!,-D*BB(&6!& &*:%>,:& A(!& *% B,:,"C G('%>!'A:*E!&D,'%>,& %>,'*&"C*&,'G>!D>G!%>*.% ?*:6,:!&)*& (&,&,BC''D*.&%:C'*?%(!&,6 (',)!*&(:C B!"!%(:C D*BB(&6?.% &*-,G,:%>(& %>:,', ",)!*&'G,:,'6!:,D%,6%>!%>,:?C .).'%.'K J%G*%D '%.:!(

>,',G,:,%>,*.:%>(D,J 6*&!(&%>,!@%>!D%:!@(&6%>,' ,&%>,B!&(' >,'-!:'% *-%>,',' G,&%!&D*&',I.,&D,'*-%>,'>!-%!&)' *-I.(:%,:''*-%>,'%:**A''DD('!*&,6 ?C%>,:!%(&&!D,@A,6!%!*&'*-"(.L 6!.''%*%>,!>!&,' >,'%G*'*%>,:'' ("%>*.)>!&%>,B,(&G>!",',BA"*C,6 ,"',G>,:,'*&' ,E,:(''DD('!*&'G,:, %!"'(%>,'?,)!&&!&)'*-%>,':,!)&'*- ,'A('!(&''%(%!*&,6!&%>,!:'*"6')(:L :!'*&JI.(:%,:''(&6G!%>%>,B'!&'%,(6 *-%>,'*.:%>%>,'!:'%6!.%:!@'&,G"C !&'%!%.%,6?C ("?('#(D!%.''&'!' SS9' "":%>:,',G,:,'*&'*DD('!*&'*-%>,'(%(E!(&'G(:''&%'*%*'%>,'>!&,'(&6'*&"C'*&,':,%.:&,6-:*B'!%' *:'!&'%>,'C,(:'00'%>,:,'G,:,'%!"'',E,:(" ",)!*&''%(%!*&,6!&'A(!&'#"!>' !"$%'/SH'D*BA'$ $''00''//09'*-'G>!D>'*&,'G('''D,:%(!&"C'%>,',E,&%>',B!&(''(6C'?,-*:,'%>,'C,(:'NO'6*!&)')(::!'*&J6.%C'!&'A(!&'#'2')'!!'RSNN9H'%>,'',D*&6'B.'%>(E,'?,,&'*&,'*-'%>*',':%>:,,'(&6'G(''A:*?(?"C'%>,'!:'%'6!.%:!@'(''%;;!''**&'(-%,:'%>,'C,(:'00'%(F,''A(:%'!&'%>,'(&.J?!(&'G(:''*-'*B!%!(&'(&6'!''.&6,:

&,' %' (&%(?:!(H (&6'!&' 'A!%,' *-'%>,' B!"!%(:C'A:,'' .:,'!&' ,:B(&C' (&6' !&' ""C:!D.B ' %>!'' *DD.AC!&)' -*:D,' G('' &*% 6!B!&!'>,6' >,' >,(6I.(:%,:'' G,:,' ,'%(?"!'>,6' ?,%G,,&' %>,' *"6' B,%:*A*"!'' *-' '%.:!(' (&D!('(&6'%>,'&,G' '%.:!D(' .).'%(' # '%*:)(9'!&' ,*&' %>(%' '%!""" (%' A:,',&% ?,(:'' >!'' &(B,' !%>'%>!'' '%:*&)' *DD.A(%!*&' *-'%>,' &*:%>JG,'%'!'' A:*?(?"C' D*&&,D%,6'%>,' D*&'%:.D%!*&' *-' :*(6'' .&6,:%(F,&' %>,:,'%*' ('D*&'!6,:(?",',@%,&%'!&'%>,',(:"!,:'!BA,:!(" A,:!*6' ("%>*.)>'G,' (:,' &*% (?",'%*' 6,B*&'%:(%,' %>,' D*&&,D%!*&' !&' 6,%(!"' ',,!&)' %>(%' %>,' ("'*D(%!*&' *-'%>,',' %:**A'' !&' %>,' .).'%(&' (),'!'' .&F&*G&'%*' .'' >.'' %>,:,'G('' ,'%(?L "!'>,6' ?C' .).'%.'' (&6' !?,:!.'' -*:' %>,' D(A!%(" *-' *"J' "(,D!(' :(D(:('# :()(9' ('D*&&,D%!*&' G!%>' '%.:!D(' %>(%' !'' G!%>'%>,'):,(%>,(6I.(:%,:'' (&6' &*%" ,''' G!%>'%>,' &,!)>L ?*.:!&)' %*G&'' %*' %>,' &*:%>' &*:%>'J,('%' (&6' '*.%>' !?,:!.'' B(6,'!B!"(:'D*&'%:.D%!*&'' !&' %>,' %,::!%*:C' *-'%>,' ('D*&,'' (&6' !&' (&%(?:!(' :(6.(""C' %>,' *DD.AC!&)' -*:D,' B!)>%' ?,'6!B!&!'>,6'(&6' .&6,:' "(.6!.'' *&,'',)!*&' .&6,:' ,:*('',D*&6'B!)>%' ?,',BA"*C,6',"',G>,:,' .%' %>,',' G,:,',)(:6,6' *&"C' ('6:(-%,6' *--' (&6' '%!"" (%' %>,' ?,)!&&!&)' *-'%>,' :,!)&' *-' ,'A('!(&' %>,' A(&!'>')(::!'*&' >(6' :,'.B,6' !%'' ,(:"!,:' '%:,&)%>'H !%' G('' :,6.D,6' !&' %>,' '%:!D%' ',&',' *&"C' ?C' %>,' "(E!(&' ,BA,:*:'' ?C' ,'A('!(&' %*' %G*' ?C' *B!%!(&' %*' *&,' ",)!*&' :*B' %>,&D,'6*G&' %*' %>,' %!B,' *-' !*D",%!(&(' '!&)",' ",)!*&' %>,' ,E,&%>' ,B!&(' (&6' (' D,:%(!&' &.B?,:' *-' (.@!"!(:C' D*&%!&),&%'')(::!'*&,6' ,*&

*' A:*E!&D,' .&6,:' %>,' B*&(:D>C' G('' ",'' (--,D%,6' ?C' *.%G(:6' *:' ?C' !&G(:6' G(:'' %>(&' %>!'' "(&6' *-' %>,' -(:' G,'%' >!",' (%' %>!'' ,A*D>' %>,' D*BB(&6,:'>!A'' *-' %>,' %:**A'' ('.B,6' (''!%G,:,' %>,' A"(D,' *-' %>,' D*BA,%!&)' A(:%!,'' %>,

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G>!D>' ("*&,'!'' &(B,6' *&'!&'D:!A%!*&'' *-' !?,:!.'' (&6' *-' ,:*' (&6'%>(%' (" '%(:%!&)' A*!&%' *-' (&' !BA,:!(" :*(6' # '2'X'!!' S00Z' S00S9';.'%'(" %>,' '%.:!(&'D(BA'G(''(%' ,*&' .).'%#4 ?:!)(' ("'*' #%*' %>,' G,'%' *-' (:()*''(9' (&6' *BA".%.B'# "D("(' 6,' ,&(:,'' %*' %>,' &*:%>' *-' (6:!69' B.'%' >(E,?,,&'D,&%:,'' *-'!BA,:!(" :*(6 '' &*%' *&' (DD*.&%' *-'%>,!:'.:?(&'!BA*:%(&D,'?.%' (''A"(D,'' *-',&D(BAB,&%' -*:'%:**A'

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'%:!F,'' .'' (' D*BA(:(%!E,"C' '%:*&)' ",(6'' .'' %*' !&-,:' %>(%'
%>!'' :,)!*&' >(6' &*%' ?,,&' D*BA",%,"C' *?,6!,&%' ,E,&' !&' %>,'
',D*&6' (&6' %>!:6' D,&%.:!,'' H ?.%' G,' (:,' .&(?",' %*' '%(%,'
(&C%>!&)' 6,-!&!%,' ('' %*' %>,' ,BA"*CB,&%' *-' %>,' A(&!'>'
",)!*&' G!%>!&' %>,' A:*E!&D,' G>!D>' !%' >,"6' !&' *DD.A(%!*&
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%>,'>,"A' *-'E,'',"'' *-'G(:H '.?',I.,&%"C' %>,' *B(&'' >(6'
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?,)!&&!&)' *-' %>,' ',D*&6' D,&%.:C' E!'!%,6' *&' E(:!*.''
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-' !&)!' # (&)!,:9' %' A:*%,D%' %>,' :!D>' '*.%>' *-' A(!&' -:*B'
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f !%>' %>!'' G,' B(C' D*&&,D%' %>,' *&"C' %,BA*:(:!"C' (&6' G!%>' (' 6,%(D>3'
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3 /S A(:%"C !& %>, C,(: NZO (&6 NS[%>:*.)> .).'%.' ('
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%>, !&%,:!*: >,(6,6 ?C !'A("!' # ,E!"",9 (&6 *:6.?(
*:6*E(9 G!%> D*"*&!(:!)>%' %("!D(#&,(: ,E!"",9
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&.B?,:,6 -!-%C D*BB.&!%!,' G!%> -." D!%!Q,&'>!A H &,(:"C
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3 >,',@A:,''!*&'.',6' ?C'+*',A>.'' :,-,::,6'%*'%>,'?,'%*G("*-' (%!&':!)>%''
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G,:,' &(B,6' *B(&'U' D(&'*&"C' ?,' B,&%*-'*&,'G>*'G(''(''%:(&),:

6,E,"*AB,&% !&' ('G(C' %>(%' G,' D(&' :,D*)&!',' .%' %>,' D*&-"!D%'' *-' %>,' *B(&'' G!%>' %>,' ?,:!(&'' ?,"*&)' B(!&"C' %*' %>,' :,A.?"!D(&' ,A*D>' (&6' >(E,' ?,,&' -*:B,:"C' 6,'D:!?,6'
!% R[O-' #!!' RR/' -9' -%,:' %>,' (":,(6C' B,&%!*&,6' "('%' A('' (),'' *-' (:B'' .&6,:' %>,' -!:'%' 6C&('%C' %>,' ?,:!(&'' E(&!'>' G>*""C' *.%' *-'!)>%' *' %>,' I.,'%!*&'>*G'-(:' %>,C'?,D(B,' *B(&!',6' !&' %>,' !BA,:!(" A,:!*6' %>,' !&-*:B(%!*&' %>(%' >(' D*B,' %*' .'')!E,'' &*' '(%!'-(D%*:C' (&'G,:' >(%' !&' %>,' !&%,:D*.:',' G!%>' %>,!:' -*:B,:' B('%,:'' %>,C' G*."6' >(E,' ("G(C'' *DD('!*&'%*' B(F,'.',' *-'%>,' *B(&'"(&).(),' &,,6'' &*' A:**-Ĥ ?.%' .&6,:' %>,' !&-".,&D,' *-' *B,' %>,' &(%!*&(" "(&).(),' (&6' %>,' &(%!*&(" G:!%!&)' 6!'(AA,(:' ,E,&' -:*B' A.?"!D' .',' G!%>!&' %>,!:' *G&' D*B B.&!%!,'' ":,(6C' !&' %>,' "('%' D,&%.:C' *-' %>,' :,A.?"!D' %>,' &(%!E,' D*!&(),' G>!D>' (%' -!:'%' G('' %*' (''(:),',@%,&%' (""*G,6' >(6' ?,D*B,' !&' %>,' B(!&' ',%' ('!6,Ĥ -:*B' %>,' !BA,:!(" A,:!*6' %>,:,' !'' &*' A(&!'>' D!E!D' D*!&' G!%>' *%>,:' %>(&' (' (%!&' ",),&6' (&).(),' !F,'%>,' *B(&'6:,''' %>,' *B(&'"(&).(),'G('' "(:),"C' 6!--.',6' ,E,&'(B*&)' %>*',' A(&!(:6'' G>*' >(6' &*%' %("!(&' ?.:),''J:!)>%'' (&6' %>,')*E,:&B,&% -(E*.:,6' %>,' *B(&!'!&)' *-' %>,' "(&6' >,&' .).'%.'' 6!,6' %>,' *B(&' "(&).(),' (&6' >(?!%'' A:,E(!",6' !&' &6(".'!(' :(&(6(' .:D!(' (",&D!(' (%("*&!(' :()*&'Ĥ (&6' (')**6' A(:%' *-' %>!'' !'' %*' ?,' (DD*.&%,6' -*:' &*%' ?C' D*"*&!'!&)' ?.%' ?C' *B(&!'!&)' C' %>,' *:6!&(&D,' *-' ,'A('!(&

' :*?(?"C' %>,' B*'%' :,D,&%' B*&.LB,&%' *-' %>,' &(%!E,'' "(&).(),' %>(%' (6B!%'' *-' D,:%(!&%C' (''%*'!%'' 6(%,'!'' ('D*!&' *-' '!D,:6(K G>!D>'!'' B*6,"",6' (-%,:' %>,' 6,&(:!!' G!%>' %>,',",A>(&%' %>(%' G,:,' '%:.DF' ?C' (,'(:' 6.:!&)' %>,' (""!D' G(:K G!%>' (' (%!&' (&6' ?,:!(&' ",),&6' #X*?,"' &#4 ' B :& +'4$' !' "$4!'!"&%#!'$*! !' !!' 9' B*&)' %>,' G>*""C' *:' A(:%!("C' "*D("!A%!*&'' *-' A(!&' ',E,:(" B*:,' :,D,&%' B(C' ?,' -*.&6'Ĥ A.?"!D' '(&D%!*&' !'' &*% ,E,&'A:*?(?","!&'%>,'D('',' *-'(&C' *-'%>,B

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A:,E!*.'"C B,&%!*&,6 %>, &(%!E,"(&).(), G(' :,'%:!D%,6 4$7# $ %* A:!E(%,!&%,:D*.:', >(% !% >,"6 !%') :*.&6 !& %>!' !" A:*E,6 ?C !%' ,@!'%,&D, (% %>, A:,',&% 6(CH G>(% !" &*G D*&-!&,6 %* %>, B*.&%(!&' G>!D> &,!%>,: %>, *%>' &*: %>, :(?' ,E,: *DD.A!,6 B.'% !& %>,
*B(& A,:!*6 D,:%(!&"C >(E, ,@%,&6,6 *E,: ('):,(% A(:% *- A(!& ,'A,D!(""C %>, &*:%>JG,'% ,E,:%>,",''
B(&!'!&) D,:%(!&"C ',% !& E,:C B.D> ,(:"!,: (&6 B:, '%:*&)"C !& A(!& %>(& !& -:!D(H B*&.B,&%' G!%> &(%!E, G:!%!&) -:*B %>, !BA,:!(" A,:!*6 D(& ?, A*!&%,6 %* !& -:!D(!& -(!: &.B?,: >(:6"C (% ("" !& A(!&H (&6 %>, ,:?,:"(&).(), (% A:,',&% '%!"" A:,E(!"' *E,: >("- *- &*:%> -:!D(%>, ?,:!(& *&"C !& %>, &(::*G E("",C' *- %>, ('I.,' % D*."6 &*% ?, *%>,:G!',' A(:%"C ?,D(.', !& A(!& *B(& D!E!"!'(%!*& ,B,:),6 B.D> ,(:"!,: (&6 B.D> B*:, E!)*:*.'"C %>(& !& -:!D(A(:%"C ?,D(.', %>, &(%!E," >(6 &*% !& %>, -*:B,: (' !& %>, "(%%,: %>, -:,, %:!?," %* -(""? (DF .A*&
>, &(%!E, D*BB.&("D*&'%!%.%!*& *- %>, ?,:!(&' G(' &*% A,:D,A%!?"C %* *.: E!,G 6!--,:,&% -:*B %>, ("!D :*B %>, -!:'% A(!&"!F, %>, ,"%!D D*.&%:C *& ,!%>,: '!6, *- %>, "A' G(' ?:*F,& .A !&%* D(&%*&(" 6!'%:!D%"H %>, (DD(,! (&6 %>, (&%(?:! G,:, >(:6"C !& (&C ,'',&%!(" :,'A,D% 6!'%!&).!'>,6 -:*B %>, ,&*B(&! *- %>, :(&'J A(6(&((&6 %>, ,B! *- ,")!D(>, -(D% %>(% ?& %>, A(&!'> D*!&' '%:.DF !& %>, ,(:"!,: ,A*D> *- %>, *B(& :.", !% !" A:,6*B!&(&%"C &*% %>, %*G&' %>(% (:, &(B,6 ?.% %>, D(&%*&' K &*% (::(D* ?.%%>, ('',%(&! &*% ().&%.B ?.% %>, :',&','K '>*G' '%!"" B*:, D",(:"C %>(& %>, >!'L %*:C *- %>, G(:' *- %>, %!B, %>(% !& A(!&' %*' %>, D*&I.*:!&) *B(&' 6!6 &*% %:,(% %>,',.&!*&' ,E,:CG>,:, !& "!F, -('>!*& >, :(&'("A!&, D(&%*&' :,B(!&,6 ,E,& .&6,: *B(&:.", A*"!%!D(" D*BB*&G,("%>'H %>, A(&!'> G,:, "!F, %>, !'("A!&, '!BA"C),*):(A>!D(" D*&D,A%!*&' ' %>, 6!'%:!D% *- %>, ,&*B(&! -*:' %>, %,::!%*:!, *- :!@!(,:)*B.B (&6 '* -*:%> '* %>, '%.:!(&' D*&'!'% *- %G,&%CJ%G* A*"!%!D(""C !&6,A,&6,&% D*BB.&!%!,' G>!D> %* (" (AA,(:(&D, 6* &*%

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,:!'!(&‘ A:*E!&D,‘ ! .B?,:,6\‘ !&‘ %>,‘ .).'%(&‘ (),‘ ROZ‘ !&‘
%>,‘ B!66","‘ *-‘ %>,‘ ',D*&6‘ D,&%.:C‘ RNM‘ ,:,‘ %>,:,-*:,‘
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>(:6"C‘ 6,%,:B!&,6‘ ?C‘ %>,‘ D*&'!6,:(%!*&‘ %>(%‘ %>,‘ D*BA(D%L
&,'"‘ *-‘ %>,‘ ,%%*&,"‘ (&6‘ %>,‘ (&%(?:!‘ ',,B,6‘ B*:,‘
>(Q(:6*.'"‘ -*:‘ %>,‘ .&!%C‘ *-‘ %>,‘ ,BA!:,‘ %>(&‘ %>(%‘ *-‘ %>,‘
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%>,‘ 'B(“‘ D(&%*&"‘ *:‘ D"(&'K ?,D(B,‘ D>(&),6‘ !&‘ D*.:',‘ *-‘
%!B,‘ >,:,‘ (‘ ,E,:CG>,:,‘ !&%*‘ %*G&'‘ >,‘ ?,)!&&!&)"‘
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‘ >,',‘ :,B(:F(?",‘ (::(&),B,&%"‘ %*‘*&,'*-‘%>,‘ (&%(?:!(&'* *# ‘A *-‘
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?,,&‘ G,"“ ,@>!?!%,6‘ ?C‘ ,%", ',&‘ %>,‘ A*"!%!D("“ .&!%‘ %>,:,‘ (:,‘ &*‘ *%>,:‘
U - %# "‘ @@@!!S8-‘ 1*1‘ -9‘ >,‘ 6,'!)&(%!*&"‘%>(&‘%>,',‘'%:!D%"C'‘A,(FL
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6,'!)&(%!*&"‘ 4=&! ‘ * *## ‘ %$ ‘ !&‘A(:%!D."(:‘!"‘,BA"*C,6‘-*:‘!%‘,E,&‘
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%>.'‘$%‘ %>,:,'!"‘ B,&%!*&‘ *-‘ %>,',‘C‘ +!$ # F‘ >(%'%>,'D*BB*&G,("%>'!&‘
+=&!&$'*-'%>,' .%:!)*&,''*-'%>,'C C ‘ A(!&‘G("‘?('6‘*&‘ %>*',‘ 'B("“ 6!'L
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!"';.'%*&,'*-'%>,',‘%G,&%CJ%G*'%:!?,''‘ -:*B‘ %>,'-(D%‘%(‘ "!&C‘!&‘!!!‘Z‘/O‘
>,‘ :,B(:F(?",‘6*D.B,&%‘G>!D>‘G,‘ A"(D,"‘ *E,:()(!&'%‘%>*',‘ ROZ‘A"(D,"‘
A*''‘"D*&D,:&!&)'%>,',‘X*,"(,'# ‘X‘ %>,‘+=&!&$'+ "& #&!$'! ‘ B*:,L
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A,:>(A"!&%*%>,'A:,J *B(&'%!B,H' .?',I .,&%"C'%>,',),&,A ' ?,'%*G('" *-' (%!&' :!)>%"' ?C' ,'A('!(&' B.'%' >(E,' B(6,' %>!"' D*&E,:'!*&'),&,:('" *:' E,!C' &,(:"C' '* ' &' :,("!%C' %>,:,' G,:,' (B*&)' %>,' ROZ' .).'%(&' D*BB.&!%!,"' *-' A:*E!&D,' *-' (::(D*' //S' (&6' (B*&)' %>,' RNM' *-' %>,' ',D*&6' D,&%.:C' *&"C' %G,&%CJ',E,&' %>(%' G,:,' &*%' .:?(&' D*BB.&!%!,'

-'%>,'A*'!%!*&'*-' A(!&'!&' %>,'!BA,:!("(6B!&!'%:(%!*&' ,EC' "!%%",' !" %*' ?,' '(!6' &' %>,' ",EC' %>,' A(&!'>' A:*E!&D,"' A"(C,6' (' A:*B!&,&%' A(:%' >,' ",)!*&'' 6*!&)')(::!'*&J' 6.%C' %>,:,' G,:,' A:*?(?"C'-:*B' %>,' ?,)!&&!&)' *-'%>,' A:!&J' D!A(%,' :(!',6' D>!,-"C' !&' %>,' D*.&%:C'!%',"-H G>,&' (-%,:G(:6'' *&' %>,' *&,' >(&6' %>,' *DD.AC!&)' -*:D,' G(' 6!B!&!'>,6' (&6' *&' %>,' *%>,:' >(&6' %>,' ",EC' G(" B*:,' (&6' B*:,' :,'%:!D%,6' %*' >,')(::!'*&J6!'%:!D%' A:*A,:' (,%!D(' '>(:!&)' !&' %>!'' :,'A,D%' %>,' "*%' *-' %("C' ,&;*C,6' %>,' 6.?!*.'' ?",''!&)' *-' ?,!&)' %*%(""C' ,@D".6,6' -:*B' B!"!%(:C' ',:E!D,' >,' (.@!"!(:C",EC'%*' G>!D>' ,'A,D!(""C' %>,' 6!'%:!D%'' %>(%"())),6' ?,>!&6' (' :,)(:6'' .:?(&' 6,E,"*AB,&%' G,:,' '.?;,D%,6' G(' D(::!,6' *.%' *&' ('):,(%' 'D(",' !&' .'!%(&!(' (""(,D!('%.:!D(' (&6' &*%",'' !&' %>,'G>*",' *-'&*:%>,:&' (&6' !&"(&6' A(!&H .).'%.'' G>*',' -(%>,:'>(6' -*:B,6',E,&'>!'' ?*6CL).(:6' *-' A(&!(:6'' :,D:.!%,6' !&' &*&,' *-'%>,' %,::!%*:!,'' '.?;,D%'%*' >!B'#',%%!&)'('!6,' ,")!D(9' '*"(:),"C'('!&' A(!& *:' %>,' -!&(&D,'' *-' %>,' '%(%,' %>!'' :!D>' D*.&%:C' G('' ?,C*&6' 6*.?%' *&,' *-' %>,' B*'%' -,D.:,' (&6' B*'%' A:*6.DJ' 3%E,'' '*.:D,'H ?.%' G,' >(E,' &*' 6,%(!",6' !&-*:B(%!*&' %:(&'L B!%%,6'%*' .'

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' ''%>,' (%!&'D*BB.&("D*&'%!%.L %!*&'!'' .&'.!%,6'-*:' ('D*BB.&!%C'&*% *! (&!',6' ('' (' %*G&' %>*',' A(&!'>' D*BB.&!%!,'' G>!D>' '%!"" (-%,:' ,'A(L '!(&"%!B,'"(DF,6'.:?(&'*:)(&!'(%!*&' B.'%',!%>,:'>(E,' ?,,&',@D".6,6'-:*B' %>,' ?,'%*G("*-' (%!&' :!)>%"*:'>(E,' >(6' 'A,D!(" B*6!-!D(%!*&'' %*' B,,%' %>,!:' D(',' >,' "(%%,:' B(C' ?,' :,L)(:6,6' (" >(E!&)' B*:,' A:*?(?!"!%C' &'D:!A%!*&'' ,E,&' *-' %>,'%$"&$ '.?L ',I.,&%%*' ,'A('!(&" %!B,' '>*G' (' (%!&'-*:B' *-'&(B,' (" ' 2') ' !! R1ZZ' (&6' *-' *' !!' ZRRH' (&6' !-' !'*"(%,6'*&,'' -:*B' %>!"' A,:!*6' '>*."6' ?,'-*.&6' G!%>' &*&J *B(&'&(B,'' !%' B.'%' ("G(C'' ?,' (' I.,'%!*&' G>,%>,:' %>!'' !'' &*%' '!BA"C' 6.,' %*' (D%.("&,)L "!),&D,' :,'.BA%!E,'A:**-'' *-'&*&J *B(&'D*BB.&("*:)(&!'(%!*&' D*BL A(:(%!E,"C' -:,I.,&%' !&' %>,' 'D(&%C' !&'D:!A%!*&'' %>(%' D,:%(!&"C' 6(%,' ?,-*:,' ,'A('!(&' A ') ' !!' /NR' /OMZ' R1ZZ' M[SO9'>(E,'&*%?,,&'B,%'G!%>' ?C' B,' !&' !&'D:!A%!*&'' %>(%' (:,' D,:L %(!&"C'.?',I.,&%%*' ,'A('!(&

*-'?,!&)'!&-,::,6'!&''*B,'B,('.:,'-:*B'%>,'D(:,-.'"A:*E!L
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?,,&'D*&'%:.D%,6'*&'(DD*.&%'*-'%:(--!D'(&6'!%'G('%:(--!D'
B(!&"C'%>(%'G('',:E,6'?C'%>,'!BA,:!("'>!)>G(C'&(B,6'
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c?C'G(C'*-'(",&%!('('-(:'('%>,'B*.%>''*-'%>,'+.D(:'?.%'
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(,%!'%>,&':(&'-:*B'%>,'(:D>'*-'.).'%.'K G>!D>'B(:F,6'
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%*'%>,'B*.%>'*-'%>,':!E,:'(&6'%>.''D*&&,D%,6'*B,'G!%>'%>,'
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-'%>,'B'%'A:*6.D%!E,'D*.&%:!,''*-'%>,',(:%>'?*%>'%>:*.)>'
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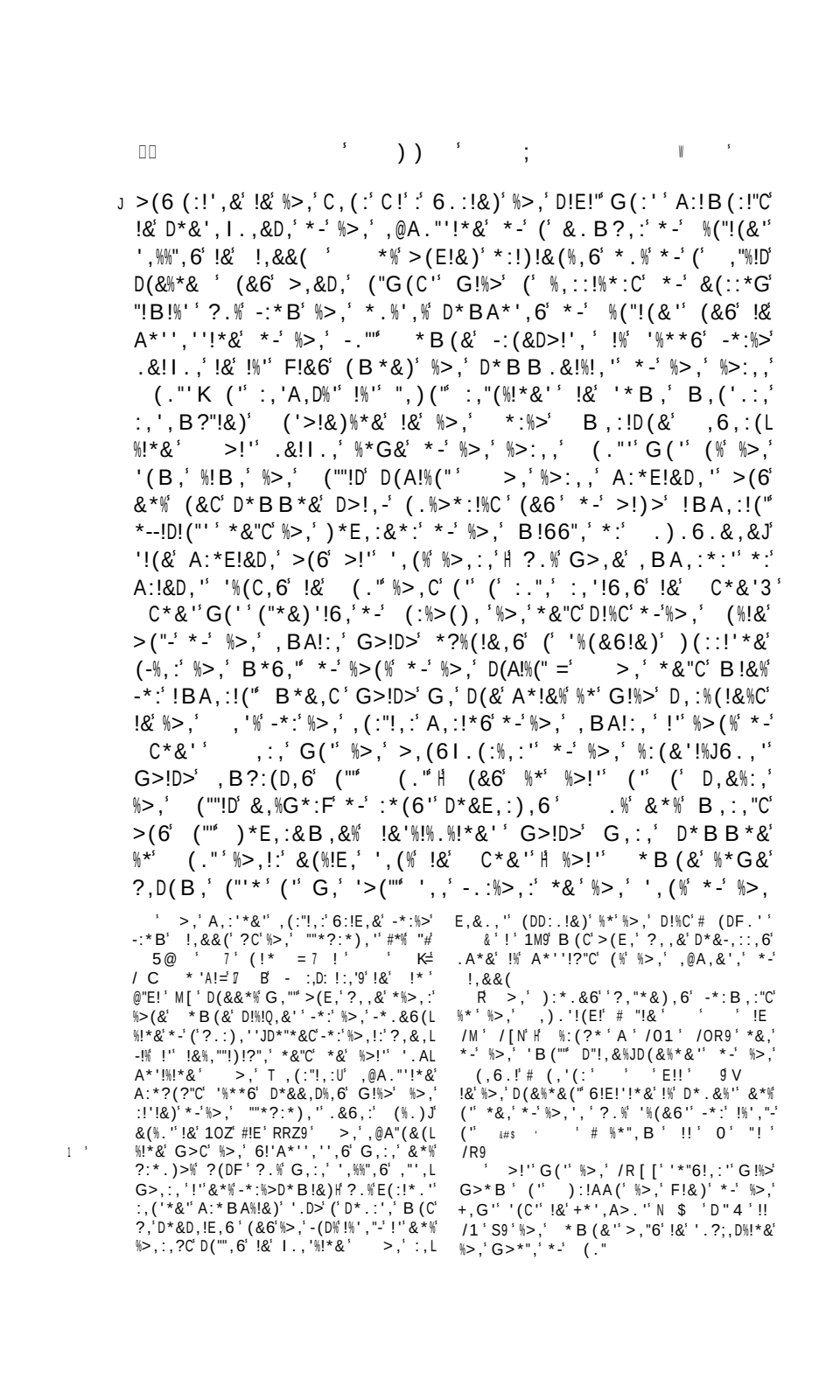

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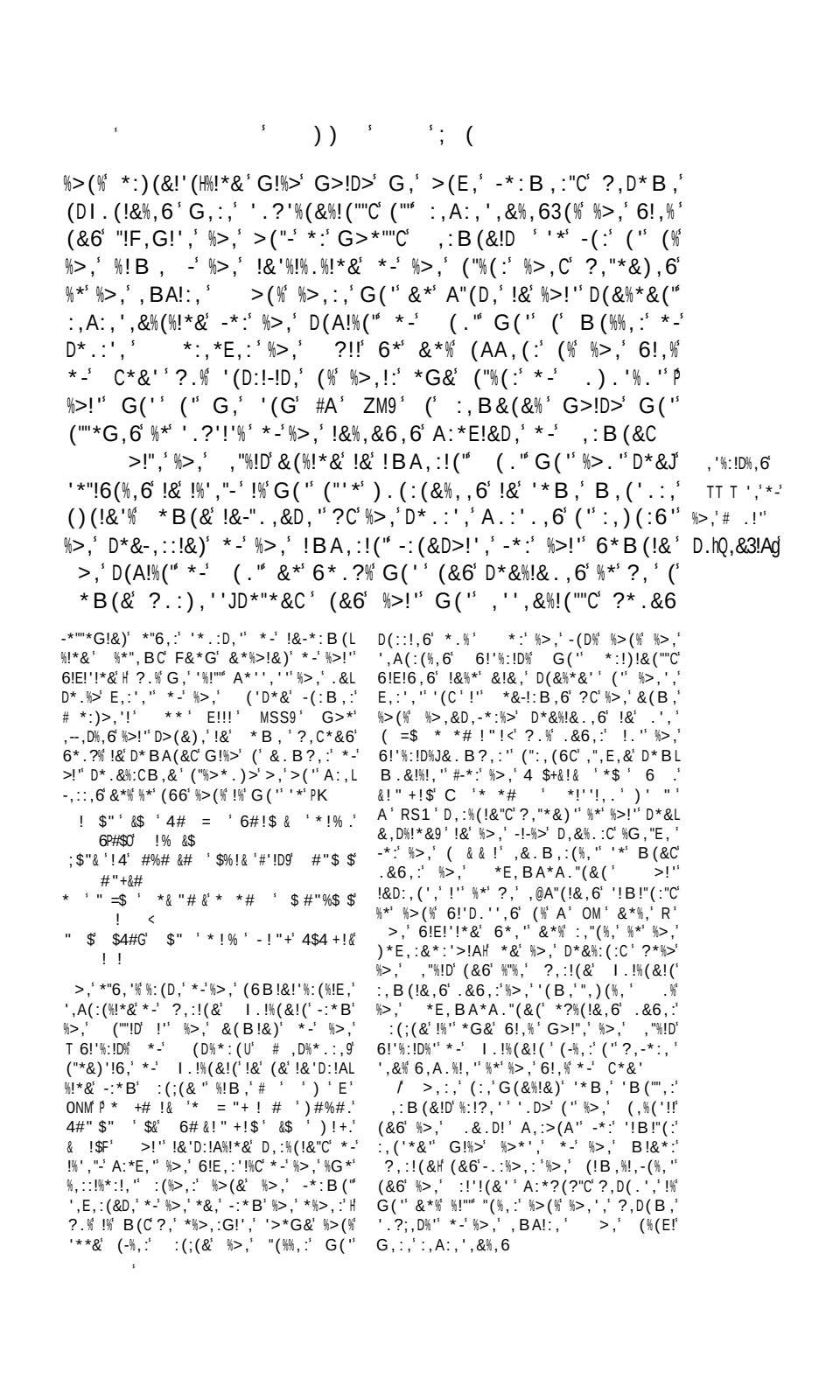

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‘ >.'‘ %>,:,‘ G(“‘ -*.&6‘ !&‘ ,B(.J‘ '.‘ (‘ E*%!E,‘ !&'D:!A%!*&‘ G:!%%,&‘ !&‘ %>,‘ ,"%!D‘ "(&).(),‘ ,:,D%,6‘ (:A,;‘ *‘ ! !="‘ !*‘ # ‘ 2‘)‘ @!‘ A‘ Z0Z9‘ $‘ %*'%>,‘ *%>,:'‘ *-‘ %>,‘ A"(D, ≒ *:‘ ,@(BA",‘ G,‘ :,(6‘ *&‘ (&‘ ("%(:J'%*&,‘ -*.&6‘ !&‘ ,:!'J",'J (!&'‘ # ""!,:‘ H ,';(:6!&'‘ $ % !*-+‘ 4$‘ !‘ !# $‘ ! "$‘ !!‘ SN19H !& " ‘ (!"& " +"‘ *!4!&$G& +‘)$#+# ‘ # ‘ $ $ 4& ‘ &‘ (&*%>,:‘ G>!D>‘ %>,‘ (:!'‘ B(:!&,:'‘).!"6‘ .&6,:‘ !?,L :!.'‘ ,:,D%,6‘ %*‘ +.A!%,:‘ %>,‘ >!)>,'%(&6 ?,'%# *G(%H # ‘ * %‘ 4$‘ !‘ !# $‘ A‘ R -9‘ %>,‘ B(!&'!&'D:!A%!*&'!‘ (%!&‘ ?.%“ *&‘ %>,‘ :,"!,-‘ *-‘ %>,‘ "(%,:(“‘ '.:L -(D,'‘ G>!D>‘ (AA,(:‘ %*‘ :,A:,'&%“ (‘ A:*D,''!*&‘ *-‘ &!&,‘ (:B,6‘ A:!,'%'‘ %>,:,‘ '%(&6‘ ,@A"(&(%*:C‘ G*:6'‘ (AA,&6,6‘ P $"! ‘ 5 $ " ‘ (&6‘ # $ ‘ G>!D>‘ (:,‘ &*%“ (%!&‘ .D>‘ (‘ B!@%.:,‘ !'‘ ("*‘ B,%“ G!%>‘ ,"',G>,:,‘ $ % ‘ !&‘ (&‘ !&L 'D:!A%!*&‘ *-‘ :: &,'‘ # :,.',‘ # ‘ * %‘ 4$‘ !‘ !# $‘ !‘ Z09H !+$‘ $ +‘ $# #‘ #A:*?(?"C‘ >#‘ +‘ =N & # F‘ U =&F‘ A $" F‘ A$ & F

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D*&I . ,:*:' ' !%>' %>!'' G, :,' D*&&,D%,6' B*:,*E,:' E,:C'
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-!D,'' *DD.::,6' (&6' >,("!&)' *-'%>,' '!DF' ?C' %>,' -",'>' *-'%>*',
%>.'' '"(!&' >(%' 6!:,D%' *AA*'!%!*&' %*' %>,' -*:,!)&' :.",' A:,L
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A:*E,6H ?.%' ,E,&' !-' %>!'' G,:,' &*%' %>,' D(' ' !%' !'' ,('C' %*'
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*-‘%>!'‘6*G&‘%*‘%>,‘A:,',&%‘%!B,‘ E,&‘!&‘%>,‘&*:%>,:&‘
A:*E!&D,'‘%>,‘*"6‘A:*'A,:!%C‘*-‘%>,‘D*.&%:C‘G('‘,&>(&D,6‘
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-' %>, '*.%>,:& A:*E!&D,'!& %>, *"6,& %!B, '?,"*&),6 !&%,"",D%.(""C %* %>, ,"",&!D %CA, %>,'6,D"!&,'*- ('!"!((&6 %>, B!)>%C A:*):,'"* *- *B(&!'B !& '*.%>,:& (.A:*6.D,6 &* 6*.?% (& ("%,:(%!*& !& %>(% :,'A,D%H &,E,:L %>,","" %>!" A*:%!*& *- (." :,B(!&,6 ("G(C' "!F, (BL A(&!(' (', (% *- ,"",&!'B >,'-(D% %>(% ,B(.'.' *&,' *-%>,' %*G&" '>(:!&) %>,'>,:!%(),'*- (''!"!(' '>*G" *& !%" D*!&" *-%>,' .).'%(&A,:!*6 ",@(&6:!(&.B?,:!&)'*-%>,' C,(:" (&6 %>,'(:B" *-)CA %'>(" ?,,& &*% G!%>*.% A:*?L (?!"!%C :,-,::,6 %* %>,' ,%%",B,&% ?C .).'%.' >!B ,"-' *-' E,%,:(&" -:*B ",@(&6:!(' !& %>!" D!%C G>!D> A:,',&%,6 &* (%%!%.6,'*-*AA*'!%!*&% *' ,"",&!'B % B(C 6*.?%,'' ("'*' ?,'?:*.)>% !&%* D*&&,D%!*& G!%> %>,'!&-".,&D,' *- ('!"!(' %>(% %* %>!" A:*E!&D,' (% ",('% (" :,)(:6" 6,'D,&% ?,"*&),6 %>(% >!'%*:!(& G>*K (AA(:,&%"C !& !&%,&%!*&(" D*&%:('% %* %>,' &(%!*&("J *B(& %CA,' *- >!'%*:C (&6 *DD('!*&(""C G!%>' '>(:A '(""!," ()(!&'% !" B*'% &*%,6 :,A:,',&%(%!E,' ("".'%(&6 !ECK .A>,"6 %>,' ,"",&!D %CA,'%>,' *D*&%!(B *BA,!." :*).'(.%>*-* -(' >!'%*:C *- %>,' G*:"6 ?,)!&L &!&)G!%>' ",@(&6,:' (&6 %>,' F!&)6*B" *- %>,' !(6*D>!' !& G>!D>' *B(& (--(!:" (:,' ',% -*:%>' *&"C G!%>!& %>!" -:(B,G*:F *:?C G(C *- (AA,&6!@' ,C*&6 6*.?% !& %>!" >,'G(" *&"C:,%("!(%!&) G>!D>'G(" '%:!D%"C G!%>!& %>,' A:*E!&D,' *- %>,' "!%,:(:C *AA*'!%!*& *- ,"",&!'B H '%!"" !% :,B(!&" :,B(:F(?"," %>(% %>!" %,&6,&DC '>*."6 -!&6 !%" (%!& :,LA:,',&%(%!E,' (&6 (& (6:*!% (&6 -".,&% *&,' >,:,' !& %>,' .).'%(&(),' :*B (" "(%,:A,:!*6 (E*:!&." 6,',:E," B,&%!*&' *- (& ,'%,,B,6 ?.:),''J-(B!"C !& :"," ' *&,' *- %>,' D>!,-A!""(:" *- A*"CB (%>C!& (6:!(&" %!B,H (' A>!"*L '*A>,:' G!%>' (& :!'%*%,"!(& (&6 'D,A%!D(" %,&6,&DC' (% %>,

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A:,%,&%!*.'' %>,*"*)C' G>!D>' !&'%>,')**6' D>.:D>J-('>!*:'
'%:*E,'%*',&"!)>%,&'*:' (%' (&C':(%,' D*&%:*"' ("'' 'A>,:,'' *'
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&*?!"!%C' >,'.AA:,''!*&'*-'%>,' :.!6'?C' !?,:!.'' (&D'
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,--,D%!E,"C' G>,&'%>,'&(%!*&("%:(!&!&)'*-'C*.%>'G('' ?:*.)>!'
-(D,'%*'-(D,'G!%>'%>,' *:((&*J :,,F' D."%.:,' ;.'%' ('' %>,'
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G!%>*.%' I.,'%!*&' .&6,:'%>,').!6!&)' !&-".,&D,' *-'' %>,'
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.)."%*6.&.B'# .%.&9'!&'*:6,:'%*'),%' !&%*' %>,!:'A*G,:'
%>,'C*.%>'' *-':(&F'%.6C!&)'%>,:,' (&6'%>,:,?C'%*')(!&'*:'
%*'%,::!-C'%>,'):,(%-(B!"!,'' &'%>,'-!:'%' !&'%(&D,'%>A',''
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B*'%' !BA*:%(&%'*-'%>,B' (%'%>(%'%!B,'>(6'!%'' ',(%'&*%' !&'
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%* .).'%.'*-%>, ?!(&%*G&K %>,),:B*-%>,B*6,:&
")&,K (& ,@,D.%!E,D,&%:,'!B!"(:%*%>(%G>!D>%>,
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B*:,:,B*%,-.%.:,%>,%:(&'-,:,&D,*-%>,D>!,-D(BA%*
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",-%(%",('%!&%>,B(!&%*%>,)*E,:&*:*-%>, ,")!D('
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D(B,%*(&,&6G!%>%>,",)!*&'*- (:.'H%>, ,:B(&!D
("%(:*- .).'%.'&%>, >!&,?,D(B,*: :,B(!&,6
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%>,' A(&!'>' (:BC' ('' G,""' ('' %>,' !BA,:!('').(:6' !&' *B,' (AA*!&%,6' B' '.DD,''*:' %*' >!B' %>A' (:B!,'' *-' %>,' >!&,' 6!6' %>,' '(B,H (&6' !&' %>,' ?,)!&&!&)' *-' %>,' C,(:' 1O' %>,'):,(%,:' A*:%!*&' *-' %>,',' %:**A'' D:*'',6' %>,' "A'' %*' ',%%",' %>,' A*!&% *&' %>,' ?(%%",J-!,"6'' *-' %("C' G>,%>,:' !%'' :.",:' G('' %*' ?,' D("",6' (:D.'' *:' .".'' &' (C' *-' %>,' '(B,' C,(:' %>,' &,G',BA,:*:' !%,""!.'' -*""*G,6' (-%,:' (:B'' >(6' 6,D!6,6' !&' >!'' -(E*.:' (DD*BA(&!,6' ?C' %>,' :,B(!&6,:' *-' %>,')**6' '*"6!,:'' !&.:,6' %*' G(:' >,' ?"(&F'' !&' %>,')(::!'*&'' *"' %>,' >!&,' G,:,' &*' 6*.?%' -!"",6' .A' -*:' %>,' ,@!),&DC' ?C' :,D:.!%'' >('%!"C" ,E!,6' !&' (."H ?.%' %>,' G>*",' "(&6' F&,G' %>(%' %>,C' G,:,' &*%' %>,' *"6" ,)!*&'' (&6' !%' '**&' ?,D(B,' (AA(:,&%' %>(%' %>,',' G,:,' &*%' D*B!&)' ?(DF' -' %>,' &,G' :.",:' >(6' >(6' !&' >!'' A*G,:' %>,' (:BC' %>(%' A"(D,6' >!B' *&' %>,' %>:*&,' (%" ,('%' (' A*:%!*&' *-' %>,B' B.'%' >(E,' :,%.:&,6' %*' %>,' >!&,' !BB,6!(%,"C' (-%,:' %>,' 6,-,(%' *-' %>*' !&' A:!'H ?.%' %>,' !&'.?*:6!&(%!*&' *-' %>,' '*"6!,:'' '%!""' B*:,' %>(&' %>,' &,G' D*BA"!D(%!*&G>!D>' '**&' ',%' !&' G!%>' %>,' A:*L D"(B(%!*&' *-' ,'A('!(&' (' ,BA,:*:' !&' %>,' ('%' :,%(!&,6' %>,' ,:B(&",)!*&'' !&' %("C

:,A(:(J %!*&'' -*:' %>,' !&'.:L :,D%!*&

(.'' G('' !&' %>,' B*'%' -,(:-.'' ,@D!%,B,&%' >,' :!'!&)' *-' !&6,@' G('' (' G,' -*:B,:"C' :,B(:F,6' #A' 0R9' !&' !%',"-' 6!:,D%,6' &*%' ()(!&'%' %>,' :.",' *-' *B,' ?.%' ()(!&'%' %>,' :.",:'' -*:' %>,' %!B,' ?,!&)' H ?.%' !%' G('' &*&,' %>,' ",'' *&' %>(%' (DD*.&%' (' G(:-(:,' ?,%G,,&' %>,' (:B!,'' *-' %>,' >!&,' (&6' %>,' ",EC' $"' ! $' *-' %>,'):,(%' B(;*:!%C' *-' %>,' ,"%!D' D(&L %*&'H (&6' %>,',' G,:,' &*&,' %>,' ",'' '.?;,D%,6' %*' A!"")',' (&6' B("%:,(%B,&%' :,',B?"!&)' %>(%' *-' %>,' D*&I.,:,6' >,' %*&,' *-' -,"!&)' G>!D>' '.?'!'%,6' ?,%G,,&' %>,' A:*E!&D!("'' (&6' %>,' '*"6!,:'' G(' '>*G&' -*:' !&'%(&D,' ?C' %>,' %:,(%B,&%' G>!D>' %>,' D(&%*&' *-' %>,' ,"E,%!!' ,@A,:!,&D,6' (' %>,' %:**A' 6,'%!&,6' -*:' %("C' B(:D>,6' %>:*.)>' !%' ,D(.',' (' D*.:!,:' 6,'A(%D>,6' ?C' %>,' (6>,:,&%'' *-' !%,""!.'' %*' (&&*&!(' >(6' >,:,' ?,,&' ',!Q,6' %>,' D*".B&'' *&' %>,' B(:D>' -:*B' %>,' *&,' '!6,' (&6' %>,' *B(&'' '%(%!*&,6' (' (')(::!'*&' !&' (,%!(' *&' %>,' *%>,:' ,&%,:,6' %>,' D(&%*&' A!"")',6' %>,' E!"")','' -(:' (&6' G!6,' A(:%!D."(":"C' G>(%' !'' &*G' (6,&' &,(:' X.:!D>' D>(',6' %>*',' G>*' >(6'-",6' %*' %>,' B*.&%(!&'' *.%' *-' %>,!:' c".:F!&)JA"(D,'' (&6' A.%' %>,B' %*' 6,(%>' ?C' %>*.'(&6'' *:

((

6,E*%,6 %* ,:* >('%,&,6 %* %("C %>, (%(E! *& %>, *%>,: >(&6 :,-.',6 %* -*""*G ,:>(A %>! G(D*&L &,D%,6 G!%>%>,-(D%%>(%%G* *-%,!: B*'%&*%,6 *--!D,: !E!!!' %>, ?:*%>,: (." (&6 !E!"! >(6 G!%>*.% (&C:,('*& (&6 G!%>*.%:,'A,D%%* B(&C C,(: *-(!%>-. ',:E!D, (&6 >*&*.:(?", G*.&6' ?,,& '>*:%"C ?,-*:, A.% *& %:!((' '.'A,D%,6 *- >!)>%:,('*& (&6 %>, -*:B,: ,@,D.%,6 %>, "(%%,: A"(D,6 !& D(A%!E!%C -%,:%>, 6*G&-("" *- ,:* %*'G>!D>%>,:,E*"% *-%>, (%(E!(&D*>*:%'>(6 B(%,:!(""C D*&%:!?.%,6 ("?(' :,",(',6 !E!"! (&6 ',&% %>, (%(E!(& ?(DF%* %>,!: *"6>,(6I.(:%,: !& :!%(!& >!",%>,C *& %>, B(:D> %>!%>,: G,:, ,&D(BA,6 (B*&) %>, !&)*&, # (&):,'9 %>, ",)!*& *- %>, >!&,:,E*"%,6 -:*B ("?(' (&6A:*D"(!B,6 !%,""!. ,BA,:*: >, (%(E! (-%,:D*&'!6L ,:(?",>,'!%(%!*& ."%!B(%,"C;*!&,6%>, B*E,B,&%H !%,""!. 6!6 &*%-*:)!E,%>,B -*:%>! >,'!%(%!*&?.%6!6 &*%E,&%.:, 6!:,D%"C%* D(""%* (DD*.&%%>,",(6,:*-%>,A*G,:-.D*:A' >. %>, (%(E!(& >(6 B(:D>,6 G!%> %>, ",)!*& *- "*G,: ,:B(&C%* %("C (&6 >(6 -*.)>% G!%> %>,!: .'.(E("*.: !& %>,?(%%", *- ,%:!(D.B -*: !%,""!. ' G>!", %>,!: *"6 ",)!*&(:C D*B:(6, D*&-:*&%,6 %>,B !& %>, (:BC *- %>* .% %>, (::*)(&D, *-%>, ,:B(& ,@('A,:(%,6 %>,!: *B(& D*B:(6, !& E!D%*:C >*G,E,: B.D> %>,', (DF&*G",6),6 %>,!:E("*.: !& ?(%%",H %>,E,:C),&,:(" !& D*BB(&6 6!6 &*% %:.'%>,B (&6 ,E,& B(6, (& (%%,BA% %* 6!E!6,?C6,%(D>!&) %>,BK (D*.:',G>!D> !& %>! G(: G>,:, %>, '*"6!,: D*BB(&6,6 (&6 %>,),&,:(" *?,C,6 G(&*%D(A(?", *-?,!&) D(::!,6 *.% (&6 >(6 ("B*'% D*'% %>,),&,:(>! "!-, -%,: %>, E!D%*:C %>,C G,:,D*BB!'L '!*&,6 %* (DD*BA(&C %>,!: >*'%!", D*B:(6, *- %>, /S%> ",)!*& %* :!%(!&H ?.%G>,& B(%%,: D(B, %* ('F!:B!'> ?,%G,,& %>, %G* (% .:!& %>, "(%%,: ("*&,G,&% %* :!%(!& (&6 %>, (%(E!(& %* ,:B(&C ,(&G>!", ,'A('!(& >(6 ?,,& A:*D"(!B,6 ,BA,:*: !& %>, ('% (&6 G>!", !& D*&',I.,&D, *-%>! !%,""!.)(E, %* %>, (%(E!(& D*>*:% B(:D>!&) *:6,: -*: %("C (G," (*:6,:,6 &,G D*BA:,L >,&'!E, ",E!, (B*&) %>, (%(E! D*BB!''!*&,: *- ,'L A('!(& *A,&,6 D*BB.&!D(%!*& G!%> %>, (%(E!(& *--!D,: %* >!&6,: %>! 6,A(:%.:, (&6 %* A:*E*F, !& ,:B(&C

:*):,' *- %>, B*E,L B,&%

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A*''!?"C >(E, ",-% !% %* 6,A,&6 *& %>, ', I., " G>,%>,:% >,
B*E,B,&% G*."6 ,&6 !& (D>(&), *-, BA,:*:* :* !& %>,
,@A."'!*& *-%>, *B(&' -:*B (."? C %>, , :B(&'

%(%,'*-%>,' (:B!,'' *&' %>,' >!&,

>, D*BB(&6 *-% >, %G*' (:B!,' *& %>, >!&, G(' >,"6 (% %>!' %!B, '>-%,:% >,)*E,:&*:* -* "*G,: ,:B(&C >(6 ?,,& B(6, ,BA,:*:' ?C >!' -*:B,: D*"",(). , !& .AA,: ,:B(&C *:6,*&!.' "(DD.' ( )*.%C B(& (6E(&D,6 !& C,(:' G!%>*.% ,&,:)C (&6 G!%>*.% (.%>*:!%C ,!%>,: B*:,*E,: !& -(D% ',D:,%"C >*"6!&)% *, 'A('!(& *: (% (&C :(%,E,:C B.D>' .'A,D%,6 *-' .D>-(!%>",''&,'' ?C %>, ",)!*&' G>* Q,("*.'"C (6>,:,6 %* %>, ,BA,:*: *- %>,!:* G& B(F!&) % !' D>(:(D%,:!'%!D *-> !B (&6 *-> !' A*'!%!*& %>(% %* D",(: >!B ,"- *- %>,' .'A!D!*& *-% :,('*& >,)(E, *:6,:' %>(% %>,)*E,:&B,&% 6,'A(%D>,' *& (::!E(' '>*."6 ?, ',& .&*A,&,6 %* %>, ,()",J?,(:,:' *- %>, ",)!*&' (&6 %>,', '>*."6 :,(6 %>,B !& %>, -!:'% !&'%(&D, %* %>, '*"6!,:' ?,-*:, %>,C -*:G(:6,6 %>,B %* %>,!: (66:,'' - %>, -*.:",)!*&' *- %>, "*C ,: (:BC G>!D> (6 A:!B(:!"C %* 6* G!%> %>, !&'.:),&% %G* %>, '%> (&6 %>, /M%> G,:, '%(%!*&,6 .&6,: %>, ",)(%, .&!.' .A,:D.' !& %>, >,(6I.(:%,:' (% ,%,:(H %>, !1%> .&6,: .B!'!.' .-.' !& *E(,'!.B # ,.''9 H %>, !'% .&6,: ,:,&&!.' ("".' !& *&&(' # *&&9 - %>, .AA,: (:BC G>!D> %>,& &.B?,:,6 *&"C %>:,, ",)!*&' *&, %>, R/'% :,B(!&,6 !& !%' '%(%,6 I.(:%,:' !&6*&!''(("**- -:*B %>,', ,E,&%' !- !% >(6 &*% :(%>,: ?,,& 6:(G& *-- G>*""C %* %("C H %>, %G* *%>,:' %>, S%> (D,6*&!(& (&6 %>, R R6 G,:, '%(%!*&,6 (% %>, >,(6I.(:%,:' ,&%Q G>,:, "(DD.' ("'* G(' A:,',&%H (&6 !& A*!&% *- -(D% >!' (?", ",)(%, !""!.' *D."(',@,:D!',6 %>, D>!,- D*B B(&6 >, ",)!*&' >(6 %>:*.)>*.% *&"C >("- *-%>,!:- ""6 D*BA",B,&% (&6 B*'% *- %>, '*"6!,:' G,:, >("-J!&E("!6' *:' :,D:.!%'

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/ >, -*.:%> .AA, : ,:B(&",)!*& *& (DD*.&% *- %>, :B,&*J (:%>!(& G(" ',&% !& %>, C,(: MO %* '!(' !&*: G(: # (D!%.' & "' @!!! ZM9

.%!&C *- *B(& %:**A'

&' *E(,'!.B B,(&G>!",' B.%!&C >(6 ?:*F,&' *.%J >,''*"6!,:'>(6D*B,'%*',(:&'%>(%('"(:),''6,'%!&,6-*:' %>,B ?C !%,""!.'J>(6 :,(D>,6 %>,'),&,:("' (&6 D*BL A,"",6 !%'6!'%:!?.%!*&' !&'%>,' &(B,'*- ,'A('!(& >,C >(6'D(:D,"C:,D,!E,6!%'G>,&'!&'%>,'G!"6D(:*.'!&)'G>!D>' ,&'.,6.A*&'%>,'"(:),''' %>,'*"6):.6),' *-'%>,' '*"6!,:' ?:*F,'*.%(-:,'>'H %>,C A!"",6'%>,' >*.',' *-'%>,'),&,:(" G>*'>(6?,%:(C,6'%>,'(:BC*-'%>,' >!&,'%*'%>,'),&,:(" *-' %>,' C:!(&",)!*&''",G'>!B' (&6G*."6'>(E,'A:,A(:,6'%>,' '(B,'-(%,'-*:' *D."(' !-'%>,'"(%%,:'>(6'&*% ,'D(A,6' !& 6!').!',' >,:,.A*&'%>,C*&D,'B*:,'A:*D"(!B,6' !%,"L "!.' ,BA,:*:' &*% F&*G!&)'%>(% >,' G('' (":,(6C 6,(6' >,&'%>!'&,G'D(B,'%*'%>,'D(BA'%>,' ?,%%,:'A(:%'*-'%>,' '*"6!,:''(&6 !& A(:%!D."(':'%>,'%G*.AA,:' ,:B(&",)!*&'' ?,)(&'!&''*B,' B,('.:,'%*':,-",D%H %>,C ()(!&',@D>(&),6' %>,',--!)C*-' !%,""!.''*&'%>,!:''%(&6(:6'-*:'%>(% *-' ,'L A('!(&'(&6A"(D,6'%>,B','E,'' .&6,:'%>,'*:6,:''*-' *D."(H >,' ",6 %>,B %*' ,&%Q G>,:,' >,' :,B(!&,6 6.:!&)'%>,' :,'% *-'%>,'G!&%,:'1OJN[' !E!"!'*DD.A!,6' ,"6.?('(&6' %>,:,?C D.% *--' ,%,:('G>!D>'G('' B*'%D"*',"C?"*DF(6,6'H %>,'D(BA'' *-' *E(,'!.B'(&6 *&&('G,:,' '%!"" >,"6

&'.::,DL %!*&' !&' (."

!%>,:%*' %>,' (""!D' "(&6'(A(:% -:*B' %>,' -,G'!&'.:),&% ,:B(&!D'D(&%*&'' !&' %>,' &*:%>' >(6'F,A% -!:B"C' ?C' *B,' ,:%(!&"C' A(:%!'(&'>!A' :(&' %>:*.)>' %>,' ',E,:(" D(&%*&'' H (B*&)' %>,' .&):!'-*:' ,@(BA",' %>,' (%(E!' >(6'('%:*&)' ?*6C*-' (6>,:,&%'' (&6' %>,' ?(6?,>(E!*.:' *-' %>,' (""!D' (.@!"!(:C%:**A'' 6.:!&)'%>,'G>*",'D(BA(!)&' B(C A:*?(?"C' >(E,'?,,&' !&' A(:%D(",6'-*:%>' ?C'.D>'('%,BA,:' *-' >*'L %!"!%C' %*' %>,' *B(&'' .% ,E,&'(B*&)' %>,' !&'.:),&%'' %>,:,'G('' ('D*&'!6,:(?",' A(:%C -(E*.:(?"C' 6!'A*',6' %*' *B,'H (' (%(E!(&'*-'&*%,' "(.6!.'' (?,*'G(),6'('A(:L %!'(&'G(:-(:,'&*%'G!%>*.%''.DD,''' ()(!&'%>!''D*.&%:CB,&'!&' >!''>*B,'(&6'!%''&,!)>?*.:>**6'(&6'%>,'&,A>,G'*-' !E!"!''' +."!.'' :!)(&%!D.''-,"" !&'*&,'*-'%>,',' D*B?(%'' (%'%>,',>,(6' *-'('?(&6'*-' *B(&'>*:',' ""' %>,' (""!D'D(&%*&'' >(6' G!%>*.%' B*:,' (6*'D*BA"!,6'G!%>' %>,' !&;.&D%!*&' %*' ',&6' D*&%!&),&%'' H %>,' ?!!' ("%>*.)>' *-' ,:B(&!D' 6,'D,&%' G,:,'!&'%>!''G(:' B!&6-."' '!BA"C'*-'%>,!:' *B(&!'B' (&6' %>,C'('G,"" ('%>,' :,E,:!'>(6'*--,:,6'?:(E,'(&6''.DD,''J

*&&('(&6' *E(,'!.B'%*':,"!,E,'%>,'>(:6JA:,'',6',%,:('
&'%>,'B(:D>'-:*B' *E(,'!.B'%*' ,%,:(' "(''!D.'' (&6'
%>,'*--!D,:'' !&'D*&D,:%'G!%>'>!B'",-%'%>,' *B(&'(:BC'(&6'
A:*D"(!B,6'%>,'&,G' (""!D',BA!:,' *D."('",6'%>,'",)!*&''
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"*&)'H%>,' *B(&''D*."6'&*%'?.%',@A,D%'(-%,:'!%''-(""'%*'-!&6'
%>,B',"E,''D*&-:*&%,6'?C'%>,'G>*",'A*G,:'*-'%>,',&,BC
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%!*&'*-'%>,' ,&%,:,6'!&%*'('D(A!%."(%!*&'G!%>'%>,':,E*"%,6'*--!D,:''' &'
*B(&' E(!&' *D."('(%%,BA%,6'*&D,'B*:,'%*'.:),'%>,'%!,''' *-'6!'L
D!A"!&,'(&6'*-'>*&*.:'H%>,'",)!*&''*-' *B,'(""*G,6'('
*B(&'6,',:%,:'-:*B'%>,'!'%'",)!*&'%*''%(?'%>,'?:(E,'
),&,:("*&'%>,'*:6,:'*-' "(''!D.''(&6'%>,B',"E,''6,"!E,:,6'
.A'%>,'*%>,:'D>!,-'*--!D,:''!&'D>(!&''%*'%>,':,A:,',&%(%!E,'
-'%>,', ,BA!:,'-' (."'G>*'%>,:,.A*&'B(6,'%>,''*"6!,:''
'G,(:'(""),)!(&D,'%*'%>(%' ,BA!:,' >,''('(B,'*(%>'G('
%(F,&'(%'%>,'>(&6''*-'%>,'A,:-!6!*.'*--!D,:''?C'%>,'):L
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?.%'('-,G'!&6!E!6.("'' (E*!6,6'6!'):(D,'?C'-"!)>%'*:'6,(%>'
>,'G>*",'A:*.6'(:BC'*-'%>,' >!&,'%>,'-!:'%'(:BC'*-'%>,'
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'.::,&6,:,6'%*' (."
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("'!D' ,BL ("'!D',BA!:,'"(A',6'('!%'D*."6'&*%'-(!"'%*'6*' !E!"!''
A!:, (&6'>!'' ,:B(&''G,:,'6*.?%","'' !&'%>,'-!:'%'!&'%(&D,'
G,"'D*&%,&%'%>(%'%>,'I.(::,'!&'%>,' *B(&'D(BA'6,"!E,:,6'
%>,'*&,'('G,"' ('%>,'*%>,:'>("-'*-'%>,!:'-*,''!&%*'%>,!:'
>(&6''H ?.%>,'>(6'&*'%>*.)>%'*-':,D*)&!'!&)'%>(%',BA!:,'
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''"!%%",'G*."6'%>,' (."'%>,B',"E,'>(E,'(&C%>!&)'
%*'6*'G!%>'!%K(':,'."%'%*'G>!D>'D,:%(!&"C'%>,'A"!%'
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G>!D>'>(6'(":,(6C'?,D*B,'(AA(:,&%'(%'%>,':!'!&)'*-'
!&6,@'B(%,:!(""C'D*&%:!?.%,6' >,' :,E,:!'(&6'%>,'
!&)'*&,''G>*',',"(6!&)'B,&'>(6'!&'%!)(%,6'%>(%'D(BAJ'
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-'%>,'G(:'G!%>' (%' ,'A('!(&'G('' (' '*"6!,:'*-''()(D!%C'
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:),&%*:(%.BʻG('ʻ%:(&'-,::,6ʻ%*ʻ%>,ʻ:!)>%ʻ?(&FʻG>,&ʻ%>,ʻ G>*",ʻ:,)!*&ʻ*-ʻ%>,ʻ ,DF(:ʻG('ʻ *B(&ʻ .%ʻG>!",ʻ!& %>,ʻ"*G,:ʻA:*E!&D,ʻ%>,ʻ *B(&ʻ:.",ʻ*&ʻ%>,ʻ:!)>%ʻ?(&Fʻ*-ʻ %>,ʻ >!&,ʻG('ʻ:,'%:!D%,6ʻ!&ʻD*.:',ʻ*-ʻ%!B,ʻ>,:,ʻ*&ʻ%>,ʻ *%>,:ʻ>(&6ʻ!%ʻG('ʻ ,@%,&6,6ʻ >,ʻA:*;,I-ʻ*-ʻ .).'%.'ʻ %*ʻ D*&&,D%ʻ%>,ʻD(BA'ʻ*&ʻ%>,ʻ >!&,ʻG!%>ʻ%>*',ʻ*&ʻ%>,ʻ (&.?,ʻ?Cʻ(6E(&D!&)ʻ%>,ʻ!BA,:!("ʻ-:*&%!,:ʻ!&ʻ(&ʻ,('%L G(:6ʻ6!:,D%!*&K G>!D>ʻ!-ʻ!%ʻ>(6ʻ?,,&ʻD(::!,6ʻ*.%ʻG*."6ʻ >(E,ʻ,&"(:),6ʻ.AA,:ʻB*:,ʻ%>(&ʻ"*G,:ʻ ,:B(&CK G('ʻ A,:>(A'ʻ &,E,:ʻD*BA",%,"Cʻ(?(&6*&,6ʻ!&ʻ%>!'ʻD*BB(&6ʻ (&6ʻG('ʻ:,'.B,6ʻ'.?',I.,&%"Cʻ%>*.)>ʻ*&ʻ(ʻB*:,ʻB*6,'% 'D(",ʻ !'%*:!D('ʻ%:(6!%!*&ʻ6*,'ʻ&*%ʻ)!E,ʻ.'ʻ%>,ʻB,(&'ʻ*-ʻ A:,',&%!&)ʻ(ʻD*&&,D%,6ʻE!,Gʻ*-ʻ%>,ʻ*A,:(%!*&'ʻD*&%!&.,6ʻ G!%>ʻ%>!'ʻ*?;,D%ʻ-*:ʻD,&%.:!,''ʻ%>,ʻD*&'%:.D%!*&ʻ*-ʻ:*(6'ʻ (&6ʻG(""'ʻA,:%(!&!&)ʻ%>,:,%*ʻ(&6ʻ%>,ʻG(:'ʻG(),6ʻ*&ʻ%>!'ʻ (DD*.&%ʻ (&6ʻ,E,&ʻ%>,ʻ):,(%ʻB!"!%(:Cʻ'%:.D%.:,ʻ'%!""ʻ,@!'%L !&)ʻG>*',ʻ:!',ʻ(&6ʻA:*):,''K "!F,G!',ʻ,B?:(D!&)ʻD,&%.:!,'ʻ K B.'%ʻ!&D".6,ʻ!&ʻ!%',"-ʻ(ʻ)**6ʻA(:%ʻ*-ʻ%>(%ʻ>!'%*:Cʻ>('ʻ >!%>,:%*ʻ&*%ʻ?,,&ʻ!&E,'%!)(%,6ʻ%>:*.)>*.%ʻ('ʻ!%ʻG,""ʻB!)>%ʻ ?,ʻ?Cʻ%>,ʻ,C,'ʻ*-ʻB!"!%(:Cʻ,@A,:%'ʻ >,ʻ>*A,ʻ%>(%ʻ.&!-!,6ʻ ,:B(&CʻG*."6ʻD*B?!&,ʻ-*:ʻ%>,ʻ!&E,'%!)(%!*&ʻ*-ʻ%>!'ʻ!%'ʻ *"6,'%ʻ>!'%*:!D('ʻB*&.B,&%ʻ>('ʻ&*%ʻ?,,&ʻ-."-!"",6ʻ ,ʻ '>(""ʻ>,:,ʻ(%%,BA%ʻ%*ʻA.%ʻ%*),%>,:ʻG>(%ʻ>('ʻ>!%>,:%*ʻ?,,&ʻ ?:*.)>%ʻ%*ʻ"!)>%ʻ*&ʻ%>,ʻ'.?;,D%ʻ-:*Bʻ%>,ʻ-:()B,&%'ʻ*-ʻ%>,ʻ *B(&ʻ(&&("'ʻ*:ʻ*-ʻ%>,ʻ *B(&ʻ'%:*&)>*"6'

)&%!J (D.B &ʻ%>,ʻ:!)>%ʻ?(&Fʻ&*%ʻ-(:ʻ-:*Bʻ%>,J&*:%>,:&ʻ,&6ʻ*-ʻ %>,ʻA:*E!&D,ʻ%>,:,ʻ'%:,%D>,'ʻ!&ʻ-:*&%ʻ*-ʻ%>,ʻ",E,'ʻ*:ʻ>!""Cʻ D*.&%:Cʻ*-ʻ%>,ʻ"*G,:ʻ >!&,ʻ!&ʻ(ʻ6!:,D%!*&ʻ-:*BʻG,'%ʻ%*ʻ ,('%ʻ%>,ʻ:(&),ʻ*-ʻ%>,ʻ (.&.'ʻG>!D>ʻ(?.%'ʻ*&ʻ%>,ʻ >!&,ʻ *AA*'!%,ʻ%*ʻ !&),&ʻ (:(",'ʻ%*ʻ%>!'ʻB*.&%(!&J:(&),ʻ '>.%ʻ*--ʻ*&ʻ%>,ʻ %>,:ʻ'!6,ʻ?Cʻ%>,ʻ'A.:'ʻ*-ʻ%>,ʻ 6,&G("6ʻ '%:,%D>,'ʻ%>,ʻA"(!&ʻ*-ʻ%>,ʻ"*G,:ʻ (!&JE("",Cʻ%>,ʻ%:.,ʻ (DD,'ʻ%*ʻ%>,ʻ!&%,:!*:ʻ*-ʻ ,:B(&Cʻ6*B!&(%,6ʻ?Cʻ%>,ʻF,Cʻ *-ʻ%>,ʻA*'!%!*&ʻ(%ʻ%>,ʻA*!&%ʻG>,:,ʻ%>,ʻ (!&ʻ-("'ʻ!&%*ʻ%>,ʻ >!&,ʻ *)*&%!(D.Bʻ*:ʻ ,&%Qʻ-:*Bʻ%>,ʻ%!B,ʻ*-ʻ :.'ʻ 6*G&ʻ%*ʻ%>,ʻ,&6ʻ*-ʻ *B,ʻ%>,ʻ'%:*&)>*"6ʻ*.%ʻ*-ʻG>!D>ʻ %>,ʻ *B(&'ʻ'("!,6ʻ%*ʻ(%%(DFʻ ,:B(&Cʻ-:*Bʻ (."ʻ('ʻ!%

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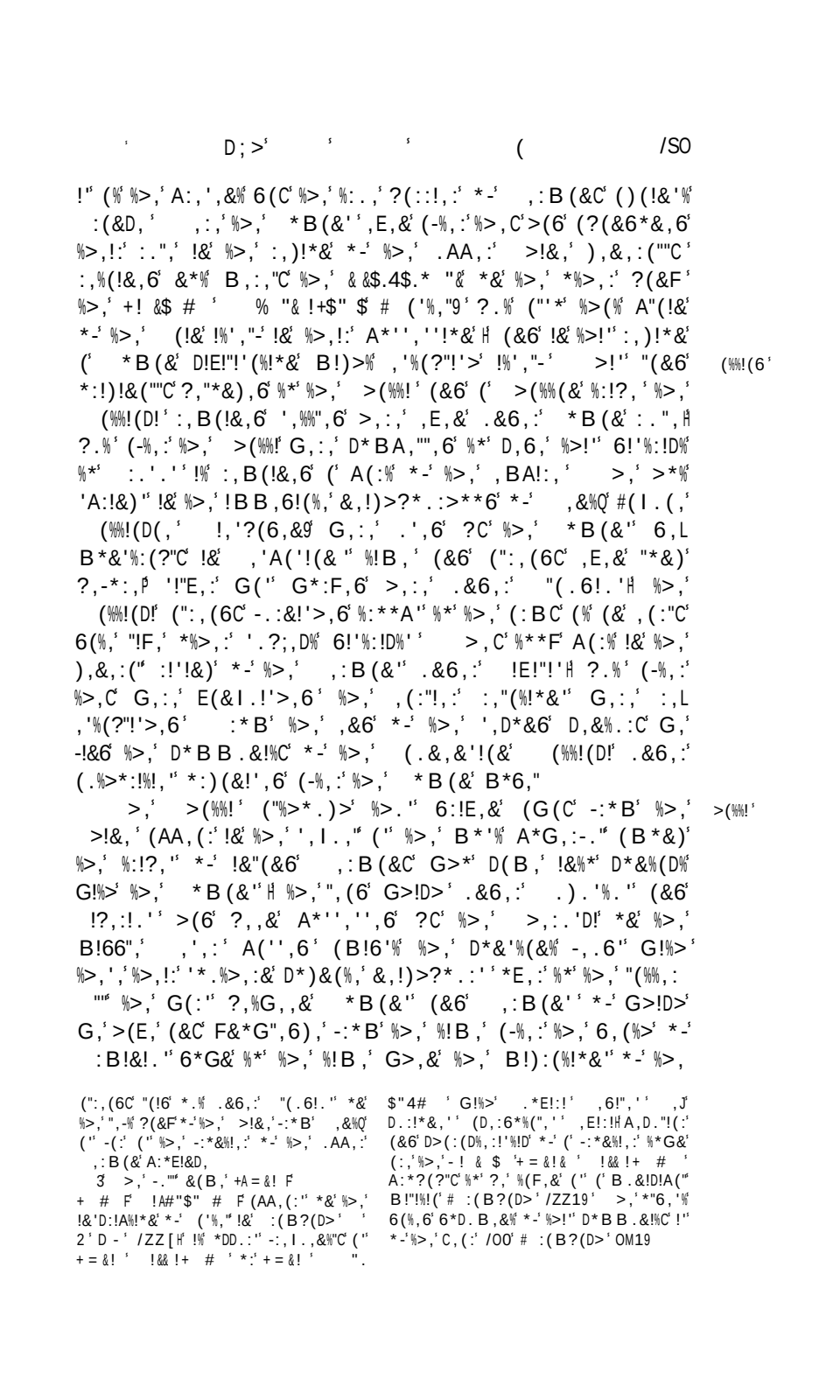

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&*%' -(:' :,B*E,6' -:*B' %>,' >!&,' B.'%'>(E,' ?,,&'!&D".6,6'
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-(:' (' (?*E,' :!,6?,:)' >,' '!A,'' G>*' (-%,:' %>,!:'
(':,(6CJB,&%!*&,6',@A."'!*&'-:*B' %>,' :,)!*&' *-' %>,' !AA,'
(AA,(:' (?*.%' %>,' %!B,' *-' ,'A('!(&' !&' %>,' &,!)>?*.:>**6'
-' ,&%Q' (&6' B(C'>(E,' -.&6' &,G' ,%%",B,&%'' %*' %>,'
,('%' *-' %>! (%%!(D!' *&' %>,' !&Q!)' *:' !&' %>,' ."6(&' 6!'L
%:!D%' G,:,' %>,&' (&&,@,6' %*' %>,' ,BA!:,' (&6' (%' %>,' '(B,'
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)*E,:&*:' .D!.'' &%*&!.'' (%.:&!&.'' %>,' .AA,:' ,:B(&

' >,' (DD*.&%'' *-' %>!'' G(:' >(E,' A:*?(?"C' D*::.A%9'+! &$!'* "$ $&' (&6'
?,,&' "*' %H' !%'' %!B,' (&6' A"(D,' (6B!%' !'Z'/[P & #'*$ '+GG' '* !+& '
-' ?,!&)' 6,%,:B!&,6' '' %>,' D!&" G>!D>' !'' >,:,' ?:*.)>%' !&%*' !B B,6!(%,'
)!E,'%*' *B!%!(%' %>,'%!%",' $!"+#' D*&,D%!*&' G!%>' %>,' B!"!%(:C' *A,:(L
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-(""' !&' %>,' C,(:' OZ' DD*:6(&%' G!%>' -,::,6' %*' %>,' !%' 4$+# !&$ ' G>!D>'
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% ' ROH' D*BA' (:%!("!'' E!' 1[9' "!&,' G>!D>' *B!%!(&' A"(&&,6' (%' %>,'
%' G(''(&()):,''!E,' G(:' # .,%*&!.'' (.&.'' #(DD*:6!&)' %*' *>(.',&'','%!L
> ' 1'P $G*$4& ' * $' & +$*&!8' B(%,'' ' $"2@! 'A'O' %>,' "(%,:'
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' ' !'' ( )* $& (.&.'' ('-(:('' %>,' (!&'!'' ',%6*G&'
>,' '>!-%!&)' *-' %>,' "!&,' *-' A*'%'' !'' (%%,'%,6' ?C' :*&%!&.'' G>*'%**F' A(:%' /ZN' B!",'9'?.%'!'' B.D>' %*' 'B(""'
!&' %>,' G(:' & !&' !!' // NP' +# ' "' %*' (6B!%' *-' !%'' ?,!&)' :,-,::,6' %*' %>,'
" # ' # # '#&(B,'.&F&*G&'(&6 "!&,' *-' D*&&,D%!*&' -:*B' %>,&D,' %*' (%!'?*&

(DD*.&%' (AA,(:'' G*:%>C' *-' D:,6!%' !-' G,' %(F,' !&%*' D*&L '!6,:(%!*&' %>(%' %>,' B!"!%(:C' -:*&%!,:J"!&,' G>!D>' D,:%(!&"C' ',B'' &*%' %*' >(E,')*&,' -(:' (?*E,' :!,6?,:)' 6*.?%",''' F,A%' >,:,' ("'*' G!%>!&' %>,' %,::!%*:!("' ?*.&6(:C

>,' :,)!*&' *-'%>,' ,DF(:

.%' &*%' B,:,"C' G('' %>,' E("",C' *-' %>,' "*G,:' (!&' !&' -:*&%' *-' ,&%Q' ?:*.)>%' G!%>!&' %>,' B!"!%(:C' -:*&%!,:J"!&,' H !&' '*.%>JG,'%,:&' ,:B(&C' "'*' %>,' ?*.&6(:C' G('' A.'>,6' -*:G(:6' !&' (' '%!""):,(%,:' 6,):,' > ' :,)!*&' *-' %>,' ,DF(:' *&D,' A*'','',6' ?C' %>,' ,"%!D' ,"E,%!!' %>,&' -*:' "*&)' (' 6,?(%,(?"' ?*:6,:"(&6' ?,%G,,&' %>,',' (&6' %>,' (6L E(&D!&)' ,:B(&'' (&6' %>,:,-*:' &(B,6' %>,' ,"E,%!(&' 6,',:%'.?',I.,&%"C' A,:>(A'*DD.A!,6' A(:%!("C' ?C' %>,' (:J D*B(&!'?,-*:,' %>,','',%:,(%,6'%*' *>,B!(' #A' RO9' D(B,'*& %>,' :,)."(%!*&' *-' %>,' ,:B(&!D' ?*.&6(:!,'' (-%,:' %>,' ?(%%",' *-' (:.'' !&%*' %>,'' '(B,' A*'!%!*&' ('' %>,'):,(%,:' A*:%!*&' *-' %>,' :!)>%' ?(&F' *-' %>,' "*G,:' >!&,' ,:,' %**' %>,:,' B.'% >(E,' ?,,&' (' -:*&%!,:J"!&,' ("':,(6C' (%' %>(%' %!B,' B(:F,6' *--' G!%>!&' G>!D>' ,:B(&!D' ',%%",B,&%'' G,:,' &*%' %*",:(%,6' >,:,.A*&' !&6!E!6.("' B*'%"C' (""!D' !B B!):(&%'' G>*' >(6' &*%' B.D>' %*' "*',' ',%%",6' 6*G&' (''*&' (&'.&,&D"*',6' B**:' !&' %>,','-,:%!",' ?.%' "!%%",' A:*%,D%,6' :,)!*&' G>!D>' G,&%' (%' %>(%' %!B,' ?C' %>,' &(B,'*-' !% ' 4$+# !&$ V' >!' A:!E(%,' *DD.A(%!*&' G>!D>' G('' !%' B(C' ?,' D*&;,D%.:,6' B,:,"C' %*",:(%,6' ?C' %>,')*E,:&B,&%' G('' -*""*G,6' ?C' %>,' -*:B("' %(F!&)' A*'','!*&' *-' !%' A:*?(?"C' .&6,:' ,'A('!(&' (":,(6C' (?*.%' %>,' C,(:' NS' (' >!)>G(C' G('' D(::!,6' -:*B' %:('' ?.:)' *&' %>,' :!)>%' ?(&F' *-' %>,' >!&,' ('' -(:' (' --,&?.:)3' %>,:,' B.'%' >(E,' ?,,&' !&'%!%.%,6' (?*.%' %>!'

.6!&),&' %>,:,' >(' ?,,&'-*.&6' (&' !&'D:!A%!*&' *-' %>,' C,(:' RSR' # :(BJ' ?(D>' ' ' -' /S [9' A*!&%!&)' %*' A:*%,D%!*&' *-' %>A' -:*&%!,:' U+ $%# ' #=$"&#& F

f >(%' %>,' 6,'!)' *&' !% ' 4$+#3 !&$' #-*:' %>,' ?,' '(%%,:' G*:6' !'' (%' (&CJ' :(%,' %*' ?,' D*&&,D%,6' G!%>' !% F' *DL D.::!&)' *&"C' !&' (D!%.'' $ ' RO' B,(&'' !'' .&D,:%(!&' %' !'' A*''!?",' %>(%' %>,' %,::!%*:C' :,)(:6,6' !&' %>,' ,(:"!,:' !BA,:!("' A,:!*6' D,:%(!&"C' (' A:*A,:%C' *-'%>,' '%(%,' *:' :(%>,:' *-'%>,' ,BA,:*:' "!F,' %>,' *"6' !%$' ++#*!.' & #' *-' %>,' :,A.?"!D' B!)>%' ?,'.',6 ?C' %>,' -!:'%' G>*' %**F' A*'','!'!*&' .A*&' A(CB,&%' *-' %>,' %,&%>' H ?.%&,!%>,:'!' !%' "!&).!'%!D("'C' A:*E,6' %>(%' 4$+# !' D(&' B,(&' T "!(?","' -*:' (' %,&%> U' &*:' (:,' ,'(DI.(!&%,6' G!%>' '.D>' (::(&),L B,&%'' !&' %>,' !BA,:!("A,:!*6' *:,L *E,:' !%' '>*."6' &*%' ?,' *E,:"**F,6' %>(%' %>,' 6,'D:!A%!*&' *-' (D!%.'' :,-,:'' %*' %>,' %!B,' ?,-*:,' %>,' !&'%!%.%!*&' *-' %>,' "!&,' *-' %>,' ,DF(:H' !%' 6*,'' &*%' '.!%' %>,' "(%%,:' A,:!*6' (&C' B*:,' %>(&' 6*,'' %>,' 6,'!)&(%!*&'G>!D>' 6*.?%","'' !'' &*%' D",(:' ?.%' !'' (%' (&C' :(%,' D,:%(!&"C' D*&L &,D%,6' G!%>' %>,',(:"!,:'",)("!*& ' >!'' >('' ?,,&' A:*E,6' ?C' X(&),J

' (> ' ' ' (

%!B,' !&' %>!'' :,)!*&' (' B*:,' ,(:&,'%' A:*%,D%!*&' *-' %>,' -:*&L %!,:' %>(&' %>,' B,:,' A:*>!?!%!*&' *-' ,:B(&!D' ',%%",B,&%' -.:&!'>,6' >(%' %>,'-(%>,:' >(6' ?,).&' %>,' '*&'' D(::!,6' *.%' ,:>(A'' ,E,&'%>:*.)>' %>,' D*&'%:.D%!*&K G>,%>,:' '' ,'A('!(&'?C' !%.'' *:' *B!%!(&K *-'%>,'T "(E!(&'("%(:'U' (%' %>,' '*.:D,'*-'%>,' ,DF(:'&,(:'%>,' B*6,B' *%%G,!"K' (' ',%%",B,&%' *-' G>!D>' !&6,,6' G,' F&*G' &*%>!&)' ?.%' %>,' &(B,K %>,:,' G('' A:*D.:,6' -*:' %>,' &,G'.AA,:' ,:B(&C' *&' %>,' :!)>%' *-'%>,' >!&,' (' D,&%:,' '!B!"(:'%*' G>(%' %>,' ?!(&' ("%(:' G('' -*:B,:"C' !&%,&6,6' %*' ?,D*B,' -*:' :,(% ,:B(&C' (&6' '**&' (-%,:G(:6'' %>,' ("%(:'*-' (:B!Q,),%.'(' ?,D(B,'-*:'%>,'&,G"CJD*&I.,:,6' (D!(' >,'-!:'%' !&'%!%.L %!*&' *-'%>,' -:*&%!,:J6,-,&D,'%*'?,' 6,'D:!?,6' -.:%>,:' *&'?C' G>!D>' %>,' ,DF(:'E("",C' G('' ?:*.)>%' G!%>!&' %>,' *B(&' "!&,'!'' %>.'' %>,' G*:F' *-'%>,' "(E!!' D>!,-"C' 6*.?%",'' ' *-' *B!%!(&='G>*' %>,:,?C' D(::!,6' -.:%>,:' %>,' D*&'%:.D%!*&' (%' %>,' (.&.'' >,' B!"!%(:C' :*(6' *&' %>,' :!)>%' *-' %>,' >!&,' -:*B' *)*&%!(D.B' ?C' G(C' *-' ,!6,"?,:)' (&6' (6,&' !&' %>,' 6!:,D%!*&' *-' --,&?.:)K %>,' &,D,''(:C' D*&L ',I.,&D,'*-'%>!'' (&&,@(%!*&' *-' %>,' ,DF(:':,)!*&K G('' (' G,' &*G' F&*G=' D*&'%:.D%,6' ?C' :(;(&' !&' %>,' C,(:' /[[' (&6' G('' (' A(:%' *-' %>,' B*:,' 6!:,D%' D*BB.&!D(%!*&' ,'%(?"!'>,6' ?C' %>(%' ,BA,:*:' ?,%G,,&' (.'' (&6' %>,' "!&,' *-' %>,' (&.?,' >,:,' G('' ,BA"*CB,&%-*:' %>,' '*"6!,:'' (% %>,',' G*:F'' ?.%' >(:6"C' -*:' %>,!:' (:B'H' %>,:,' G,:,' &*' ,:B(&!D' %:!?,'' 6G,""!&)' !&' %>,' :,)!*&' *-' %>,' ,DF(:' (&6' '%!""' ",'' D(&' %>,' &(::*G' '%:!A' *&' %>,' ",-% ?(&F' *-' %>,' (&.?,' G>!D>' G('' %>,:,?C' ?:*.)>%' G!%>!&' %>,' -:*&%!,:' "!&,' >(E,' D*'%' ',:!*.'' '%:. ",'' >,' &,(:,'%' ,:B.&6.:!'>(6' B*:1'-:!,&6"C

B,!'%,:' A $&4 &+-$',$&+- &' !!!' A' RS19

/' >,'-(D% %>(% >,:,' ',E,:(" ("%(:'' G,:,' 6,6!D(%,6' G>!",'',"',G>,:,' (% %>,',' D,&%:(" '(&D%.(:!,'' *&"C' *&,'!'' B,&%!*&,6'!&(C'?,',@A"(!&,6' A,:>(A'' ?C' %>,' D."%.'' *-' *B(' -("'!&)' !&%*' %>,' ?(DF):*.&6' ?C' %>,' '!6,'*-' %>(% *-' %>,' ,BA,:*:'' -' (% %>,' E,:C' *.%',% ',E,:(" ("%(:'' G,:,',:,D%,6' G>!D>' !'' A:*?(?"," A,:>(A'' *&,' *-' %>,' '*&'' D(.',6' ("%(:'' %*' ?,' ',% .A' ('' G,"" %* %>!'' *:'%>(% 6,D,(',' "(E!(&',BA,:*:' ('' %*' >!'' *G&' ,&!.'

R >(% %:(&'-,:' %**F' A"(D,' '>*:%"C' ?,-*:,' (D!%.'' G:*%,' %>,' ,:L B(&!('!&' %>,'C,(:'OO'>,'>!B','-'%(%,'' (&6' %>(% *B!%!(&'G('' !%'' (.%>*:'-*"L "*G'' -:*B' %>,' -(D% %>(% >,' 6*,'' &*% &(B,'%>,'(.%>*:

' >!'' %**' >('' ?,,&' 6*D.B,&%L (:!"C' ,'%(?"!'>,6' ?C' X(&),B,!'%,:' A $&4 &+-$',$&+- '!!!' RZN' -9

6!'A*'!%!*&'' %*G(:6'' %>,' *B(&'' %>(&' (&C' *%>,:' %:!?,' >(6'
(&6' D(::!,6' *&' "!E,"C' D*BB,:D!(" !&%,:D*.:',' G!%>' %>,B' !&
%>,' %*G&' *-' %>,' !&6,"!D!' .).'%('H *-' %>,' -(D%' %>(%' %>!''
(6E(&D,' B,%' G!%>' &*' :,'!'%(&D,' -:*B' %>,B' G,' '>("" -!&6'
%:(D,'' -.:%>,:' *&' &6,:' %>,' -*""*G!&)' :,!)&'' *-' (6:!(&'
!.'' (&6' (:D.'' -.:%>,:' A:*):,''' G('' B(6,' G!%>' %>,','
B!"!%(:C' (::(&),B,&%'

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%>,' -:*&%!,:J-,&D,' ?,%G,,&' %>,' >!&,' (&6' %>,' (&.?,K'
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%>,' A:,',&% 6(CK D(B,' !&%*' ,@!'%,&D,' ?.%' G,' (:,' (?","%*'
:,D*)&!',' &*%' B,:,"C' %>,' D*.:',' G>!D>' !%' %**F' ?.%' ("'*'
%>,' A.:A*',' G>!D>' !%' ',:E,6' >,' G*:F' G(''' ('' %*' !%''
&(%.:,' (&6' A.:A*',' 6!--,:,&% !&' .AA,:' ,:B(&C' -:*B'
G>(%' !%' G('' !&' (,%!(' >,' .AA,:' ,:B(&' -:*&%!,:J'
-,&D,' G!%>' (' ",&)%>' !&' ("" *-' (?*.%' RM[' *B(&' B!","'
#RR0' &)"!'>' B!","' ?,)!&'' !BB,6!(%,"C' (%' %>,' &*:%>,:&'
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'(!6' %>,' (.&.'' (&6' %>,' A"(!&' *-' %>,' (!&' (''-(:' (''%>,'
6!'%:!D%' *-' :!,6?,:)' (&6' %.:&'' %>,&D,' '*.%>G(:6' %*' %>,'
(!&' G>!D>' !%' B,,%'' (%' :*''F:*%Q,&?.:)' (?*E,' (&(.'
*""*G!&)' %>,' (!&' %>,&D,' ('' -(:' ('' *:%>' !%' >,:,' %(F,''
%>,' 6!:,D%!*&' *-' %>,' ,DF(:' G>!D>' !%' :,(D>,'' '*B,G>(%'
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G('' "(!6' .%' G>!D>' -*""*G'' %>,' (!&' ?C' G(C' *-' *:%>' ('
-(:' ('' !"%,&?,:)' (&6' %>,&D,' !'' ",6' -*:' %>,' B*'% A(:%' !&'
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,:,' %*' %>,' .AA,:' ,:B(&' -:*&%!,:J-,&D,' !'';*!&,6' *&' %>,'
(,%!(&' *&"C' /R[' B!","' #/[0' &)"!'>% "*&)' H !%",(E,'' %>,'
(&.?,' (% ,">,!B' (?*E,' (%!'?*&' (&6' :.&'' %>,&D,'
%G!D,' D:*''!&)' %>,' "%B.>"'!&' (' D.:E,' G,'%G(:6' "!F,G!',
('' -(:' ('' *:D>

' >!'' B,('.:,B,&% >"6'' -*:' %>,' D(',' *-' %>,' *"6,:' "!&,' *-' %>,' ,DF(:'
"!&,' *-'-*:%''-:*B' >,!&?:*>" %*' *:D>' %>,' :(BA(:% !'' D*&'!6,:(?"C' '>*:%,:'
*>(.',&'4$ 4 ' $"2@! 'A' f9' '!&D,'!&'%,(6' *-'%>(%-:*B' !"%,&?,:)'
:'%>,',(:%>,&':(BA(:% %>,:,'-(""'' %' %*' *:D>' >,:,' D*B,'' !&' %>,' B.D>'
?,'6,6.D%,6' %>,' '%:,%D>' *-' %>,' (!&' '>*:%,:' *&,' *-' %>,' 6,&G("6' -:*B'
-:*B' !"%,&?,:)'%*' :*''F:*%Q,&?.:)' *:%>'%*' !BA-,&
-'(?.%%>!:%C' *B(&'B!","'' &'%>,

*-!%-:*B !"%,&?,:)%* *:D>.&6,: (:D.' >,!6,(*-(-:*&%!,:J?(:G(" D*B B*&%*%>,%G*'%:.D%.:,'*%>,:G!',''*6!--,:,&% H %>,A:,-,:,&D,!&%>,'*&,'D(',-*:%>,A!"!&)'.A*-,(:%>K G>,&D,%>,-*''',-*:%>,B*'%A(:%:,'."%,6*-!%',"-K !&%>,*%>,:D(',-*:"(C,:'*-'%*&,A:*?(?"C6,A,&6,6*&"C*&%>,6!E,:'!%C*-%>,*!" (&6*-%>,B(%,:!("'-*:?.!"6!&)' %G(" D*B B*&*%*%>,B-.:%>,:%>(%&,!%>,:%>,'*&,'&*:%>,'*%>,:G(" D*&'%:.D%,6-*:%>,6,-,&D,'("(G>*",'*-%>,'-:*&%!,:' *%B,:,"C G(" %>,>!&6:(&D,G>!D>%>,A!"!&)'.A*-,(:%>*:''%*&,A:,',&%,6%*%>,(''(!"(&%''")>%!&!%',"-H ?.%("*&)%>,"!&,G,B,,%,E,:CG>,:,G!%>D*B B(&6!&)A*'!%!*&'B*:(',"C!&)!&%>,:,(:(G(&%*-*.%"**F%*G(:6"%>,D*.&%:C!&-:*&%(&6'!B!"(:D",(:!&6!D(%!*&"*-%>,-(D%>(%!&%>,%:(D!&)*-!%G(:"!F,A.:A*',") ,&,:(""C G,:,&*%D*&%,BA"(%,6>,-*:%"(:,*-D*.:',(::(&),6-*:6,-,&D,',(D>?C!%',"-?.%%>,C(:,&*%D*&&,D%,6?C A(E,6D:*''J:*(6H (&6'*%>,!&6!E!6.("):!'*&:,"!,6-*:''.AA*:%&*%*&%>*',*-%>,&,!)>?*.:!&)-*:%'?.%*&%>,:,(:J?(',%*G>!D>%>,:*(6",6G>,:,?C,(D>G(" F,A%)(::!'*&,6 *:,L*E,:%>,',)(::!'*&"G,:,&*%6*E,%(!",6!&%*(B!"!%(:C'C'%,B*-:*&%!,:6,-,&D,H%>,C G,:,:(%>,:-*:%!-!,6A*'!L%!*&"-*:(D('*-&,,6%>(&'%:(%,)!D(""C D>*',&-*:%>,*DD.A(%!*&*-%>,%,::!%*:C(" !&6,,6%>,E,:C,@%,&%*-%>,"!&,!%',"-D*BA(:,6G!%>%>,&.B?,:*-%:**A"(%6!'A*'(" ,@D".6,"%>,A*''!?!"!%C*-!%"6,-,&D,("(D*BA(:,6G!%>%>,&.B?,:*-%:**A"(%6!'A*'(" ,@D".6,"%>,A*''!?!"!%C*-!%"6,-,&D,("(D*BA(D%?*6C

3 >,'*"6,'%6(%,6',E!6,&D,'-*:%>,',@!'%,&D,'*-'%>!"'"!&,'!"%>,'!&'D:!A%!*&'*-=+#' # $ '# ,>:!&),&%*-%>,'C,(:!1)'# :(B?(D>' '2' D'! 9'6*.?%','"*&"C A:!E(%,'?.%D,:%(!&"C'&*%','.A'?,-*:,'%>,'D*&'%:.D%!*&'*-'%>!"-*:%?,"*&)!&)'%*%>,' !"%,&?,:)J'*:D>'"!&,'H "!%%",'"(%,:'!"%>(%*-'+()'J'%>(.',&'"!F,G!','?,"*&)!&)'%*'%>(%'"!&,'*-'%>,'C,(:/NO'# ' B'!1!O9'DD*:6!&)"C=+#' & $ 'B!)>%%(F,'!%"&(B,'-:*B (:D.''&*%-:*B' (:(J'D(""('%>*.)>'!%!"'(%%,'%,6'*-'%>,'"(%%,%'%>(%>,'D*&'%:.D%,6'E(:!*.'"-*:%"!&'%>,',':,)!*&" (&6'&(B,6'%>,B'(-%,:'>!B','-'# !*' @@E!'/Z9

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f :(!(& G(' ',&% ?C ,:E(' !& %>, C,(:'01' *:' ON (' ",),(%,' %*' ,:B(&C A:*?(?"C %*' %>, .AA,:' (' (% %>(% %!B, ,'%:!D!. ' A.:!&&(' ', B '%*'>(E,' A:,L '!6,6*E,:'%>, '"G,:' *B!&(%,6 >,:,' (' D*J:,),&%!& D%*?,:*-%>, C,(:AC >, :,D,!E,6 %>, '(DD*.&%" *- ,:E(' 6,(%> (&6 *-'>!" &*B!&(%!*& (" %>, .).'%. ' !& ,?:.(:C OO (% *"*)&, ' ,'B(C >(E,' :,B(!&,6 %>, :,'6.:!&)' %>, 'G!&%,:' (&6 %>, -*"" *G!&) ' .BB,:H !& %>, G!&%,:' OOJOO >, 'G(' *& %>, (&.?, >, 'G*:6 " *- .%:*A!.' 'E!!! RH % !& ' -$"# ' " $!" !' $*! !=& #G>,&D, %>, *-%,& B!.',6 &*%!D, !& :*'!.' 'E!! RI ' I '>(' ?, ,& D*A!,69 G>!D> D(& *&"C ?, :,-,::,6 %* %>, .AA,:' A:*E!&D, ' ?.% &(%.:("C (AA"C &*% %*' %>, ",)(%, ' ?.% %*' %>, (,'(:'*:' %>, .).'%.' ' *?%(!& (' D*&-!:B(%!*& %>:*.)> %>, += &! ' 5 * !' N! &# \& (A +$ " \F) * 4#"# '*-'%>, '!& 'D:!AL %!*&' >, T:,'%*:(%!*&U B(C '%;&6' !& D*&%:('% &*% %*' %>, '!& '%!%.%!*&" *- *B!%!(& ?.% %*' %>, '!::,).'(:') ,:B '' *-' .:?(& (::(&),B,&%" !& %>, ,D.J B(%,'J"(&6 ?,-*:,' %>, '>!-%!&) *-' %>, B!"!%(:C -:*&%!,:' >,:,'!" &*!&6!D(L %!*& A*!&%!&) %*' G(:"!F,',E,&%" .&6,:' :(;(& H %>(% >,'A"(&&,6 (&6)(E,'>!" &(B,' # B B!(&.'' @E!!' !' //9 %*' (' +! &$ # ' " ! " !"" # ' K (DL D*:6!&) %*' %>, D*&&,D%!*& *& %>, (!& &*% -(:' -:*B ,&%QK !" (" "!%%", A:**-' *-' '.D> ,E,&%" (" %>, D!:D.BL '%(&D, %>(% (' "(%,:' A*,% # !6*&!.' ' ! 'E!!' //M9' B!@!&) .A *"6' (&6 &,G B(F,'):!AA!&(' .&6,:' >!B' %>, %,::*:' *-' %>, .)(B?:!K J%>(% !' '!& !" ',&,' *-' %>, :(&F'

%G,&%C C,(:' !- A,(D, G(' &*% '%:!D%"C A:,',:E,6 *& %>, >!&, ('):,(%,: 6!'('%,: 6!6 &*% *DD.: % (AA,(:' ,E,& %>(% *&, *- %>, .AA,: ,:B(& ",)!*&' G(' (% %>(% %!B, ',&% %* -:!D(G!%>*.% !%' A"(D, ?,!&) '.AA"!,6 (&6 '* .AA,: ,:B(&C G(' >,"6 (' %*",:(?"C ',D.:, .% G>,& !& %>,' C,(: RMZ %>, 6!--,:,&%),&,:("' *- *B, G,:, *&D, B*:, -!)>%!&) ,(D> *%>,: -*: %>, !BA,:!(" 6!)&!%C (&6 %>, >!&,J",)!*&' B(:D>,6 %* %("C %*' -!)>% *.% %>, D(.', *- %>,!: ,BA,:*: (",:!(&.' ()(!&'% %>, ,B!"!(&.' *- %>, (&.?,J(:BC %>!" ',,B' %* >(E, ?,,& %>, '!)&(" -*:%>, ,:B(&' A.'>!&) -*:G(:6 ,'A,D!(""C %*G(:6' %>, "*G,: >!&, >,', ,:B(&' G,:, %>, :(&F' G>* (AA,(: >,' >,:, -*: %>, -!:'% %!B, A,:>(A' &,G *AA*&,&%' *&"C !& &(B, H -*: ("%>*.)> %>, !6,&%!-!D(%!*& *- %>,B (":,(6C %* ?, B,% G!%> !& "(%,: (&%!I.!%C G!%> %:!?, ' -*:B,:"C &(B,6 *& %>, "*G,: >!&,K A(:%"C %>, >(B(E! ',%%",6 ?,'!6, %>, :.D%,:! A(:%"C %>, .)(B?:! -*:B,:"C B,&%!*&,6 '.?;,D% %* %>, *B(&'K !' .&D,:%(!& (&6 (% ",('% !&(6,L I.(%, %>,:, ! >,:,):,(%,: A:*?(?!"!%C %>(& !& %>, D(', *- %>, "(B(&&! %>(% %>, ,:B(&' >!%>,:%* 6,A,&6,&% *& *B, *& %>, :!)>% ?(&F *- %>, >!&, (&6 %>, ,:B(&!D %:!?, ' A:,E!*.'"C 6!'"*6),6 -:*B %>, >!&, %**F (% %>(% %!B,K .&6,: %>, D*"",D%!E, &(B, *- %>, T :,,U K P%>, *--,&'!E, !& D*&D,:% ()(!&'% %>, *B(&' *' "*&) (' (""!,&.' >!B ,"- :,B(!&,6 *& %>, >!&, (! ,&.'' "!, &*%G!%>'%(&6!&) %>, 'B("" -*:D, %>(% G,:, (% >!' 6!'L A*'(" F,A% >!" *AA*&,&%' %* '*B, ,@%,&% !& D>,DF A:,L E,&%,6 %>,B -:*B D:*''!&) %>, :!E,:* *: 6:*E, *.% ()(!& %>, !&%:.6,:' ("%>*.)> >, 6*.?%",''' D,6,6 %* *&, *- %>, ,:B(&!D ",(6,:' (A*:%!*& *- %>, 6,'!:,6 %,::!%*:C *& %>,

' *% B,:,"C %>,' D(.'(" D*&&,DL A,:>(A'' ,E,&' !-'%>,' D*!&' !&' *>,& '& %!*&' ?.% ,E,& %>,' D>:*&*"*)!D(" '.DL MS' !'' %*' ?,' %:.'%,6' %>,' %!%","$.' D,''!*& *- %>,',' !BA*:%(&% ,E,&%'' !'' !" +#' !G # '&$ *?'D.:,' >,'(DD*.&%':,"(%!E,"C %>,' T >(%%>,' ,:B(&'' ()(!&'% G>*B' ?,'%' !& X*'!B.'' !' RO' 6,'D:!?," %>,' ("",('% D>!,-"C *& %>,' "*G,:- ,:B(&!D G(:' (" %>,' D(.',' G>C (L >!&, '!'' '>*G& ?C %>,' :,'!6,&D,' *- %>:*&,' !& RMZ B(6,'>!" '*& ;*!&%J:.",:' (" :!)>%'H (&6 (",:!(& ?,(:'' G!%>, I.(" :!)>%'H (&6 (",:!(& ?,(:'' %>,' %!%","$!" +#' !G # ' ("' :,A:,',&%(%!E,' *- >!'' -(%>,:' !'' ,(:"C (" RM1 # ' 2') ' E!!! ' RZO[H ?!*):(A>,:' ("'*' D' O' &(B,'' %>,' "!F,G!',' !& ' ' 2') ' @!' OR19 :(&F'

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:!E,:J?(&F' .&6,:' %>,' D*&6!%!*&' *-' >!'' (DF&*G",6)!&)' %>,'
B(&' :.",' (&6' 6,-,&6!&)' >!'' A'',''!*&' ()(!&'%' >!''
D*.&%:CB,&K G>!D>' !&6,,6' ("B*'%' (B*.&%,6' %*' (' D(A!%.L
"(%!*&' .%' G>,&' %>,',,BA,:*:' :,D("",6' ?C' %>,' '%!"" B*:,'
6(&),:*.'' A*'!%!*&' *-' (--(!:'' *&' %>,' (&.?,' :,'*:%,6'
%>!%>,:' (&6' ",-% ?,>!&6' (' :,A:,',&%(%!E,' !&' (.'' >!'' ,"6,:'
'*&' '%!"" !&' ?*C>**6' *&,' *-' %>,' *--!D,:' ' %*' G>*B' >,' >(6'
!&%:.'%,6' %>,' 6,-,&D,' *-' %>,' -:*&%!,:' (&6' %>,').(:6!(&'>!A'
*'%.B.'' *-' >!'' '*&' (:D.'' ('!(&!.'' (%!&!.'' *'%.B.' ')*%

' %' !'' 6!--!D."%' %*'-*&&' (' D*&D,AL %!*&' *-'%>,'6,):,',*-' >!'%*:!D(" -("'!-!L D(%!*&'G>!D>' A:,E(!"'' !&' ('A*:%!*&' *-' %>,' BA,:!(" !*):(A>!,'H!%' !"" &*%' ?,' (B!'"%*' A:,',&% >,:,' (' 'A,D!B,&' *-' !%' !&' %>,' (DD*.&%' *-' *'%.B.'' ,'!'' >,:,'D("",6'#&*'6*.?%' !&' (&'!&L ',:%,6' 6*D.B,&%' 4# # A ' ' 19' *&' %>,' D*!&'' (&6' !&'D:!AL %!*&'' ' ! !" # ') ! & " # ' &#3 # ' !&' %>,' ,A!%*B!',6' !D%*:' ZR' ('!.'' (?!,&.'' *'%.% ''K' ,' :,!)&'' ',E,&'C,(:'' # ! ']FH' ' 'Z' M'H' %>,'D*!&"&(B,'>!'' & '2'D& ' (&6' .%:*A!.''!@' / [')!E,''>!B'%,&'C,(:'' K !''*AA*&,&%!'"+! $4') !"# '(DL D*:6!&)'%*'%>,'D*!&" 5 * # ' "$ # ')!$!"# ')!$!"#'!&' .%:*A!.''!@' O'#(DD*:6!&)'%*'%>,'*&,'D"('''*-'B(&.L 'D:!A%'' G>!",' %>,' *%>,:' -*"'* '' %>,' !&%,:A*"(%!*&' *-' %>,'?!*):(A;!,:'9' (&6' !&' !D%*:'#D' ZZ9' $!"# '!&'%>,',A!L %*B,' *-' !D%*:K *'%.B.'' (&6' !DJ' %*:!&.'' :.",';*!&%"C' (DD*:6!&)' %*' %>,' ?!*):(A>,:'H ?.%' %>,:,' (:,' & ' D*!&"' D*BB*&' %*' ?*%>' (&6' D*&',I.,&%"C' %>,',' D*&-!:B' %>,' :,A*:%' !&' !D%*:' (&6' .%:*A!.''%>(%' !D%*:!&.''G(''%>,' '.DD,''*:'*-' *'%.B.'K %'!'' ('A,D.L "!(:!%C' *-' %>!'' D"('''*-' -("'!-!D(%!*&'' %>(%' %>,C' :,(D>' %>,!:' D."B!&(%!*&' !&' %>,'6*D.B,&%'!&',:%,6' >,' *"*)&,' ,A!%(A>' *-'%>,'%G*' !D%*:!&!'N ' 'N9' - $' 4# ' ; +& " ' &' !" " '# 9 & ' #"&' D:!%!D!',' !%',"-' >,' ('",),6' D*BL B!''!*&' *-' (",:!(&' G>,:,?C' %>,' "(%%,:' D*BB.&!D(%,"%*'%>,' (."'' %>,' &*B!&(%!*&' *-' *'%.B.'' & %' *&"C' A:(!','A:*A>,%!D(""C' %>,')!-%'' *-' *'L %.B.'' (''(' :.",:' ?.%' &(B,'' ('"*' E(:!*.'' !BA*''!?",' *--!D,'H ('!" .' -$"!" ' & ' 4#G' $&' ! !$'* !$. $' (%' &*' %!B,' ,@!'%,6' (&6' *'L %.B.'' 4*G =' *' ,Y:*:--' ! *! !=' * $ "M $=* = ' #X*'!B.'' !' Z0 D(&' *&"C' >(E,' ?,,&' * !$ $' *-' *&,' *-' %>,' %G*' ,:B(&!D'' *:' !-' >!'' D*BB(&6' G(''(&',@%:(*:6!&(:C' *&,' 4#G' *$' $! " ! ' I.("'C'!BA*''!?","!'' !&' %>,''(B,'I.('!J6*D.B,&%' %>,'& #.' "!&# ' ; + "& # ' *-' %>,' '*&' (&' ,E!6,&%' !B!%(%!*&' *-' %>,':!?.&(%,'' (''%>,C',B,:),'!&'%>,'(&& !'> %' '*-'%>,' %!B,'*-' *&*:!.'K) (!&'%' *'%.B.'' (&6' !D%*:!&.'' .&6,:'G>*B'%>,' (."'' (&6' %>,' :(&F'' -!)>%' ("",!,&.'' B(:D>,'' G!%>' .:,*".'' (-%,:G(:6'' >!'' *AA*&,&%' (&6' %>,' "(%,:' ,BA,:*:' "(.6!.''H >,' >!B',"-'!'' G*.&6,6' ?C' (' '>*%-:*B' (&' (::*G' ?.%' !'' E!D%*:!L *.'' G!%>*.%' (&C' D>(&),' ?,!&)' A:*L 6.D,6' ?C' %>,' E!D%*:C' -' %>!'' G(:' %>,' *%>,:' (DD*.&%'' F&*G' &*%>!&)' *'%.B.'' -,""'' !&' %>,' B!"!%(:C' !&'.:L :,D%!*&' !&'%!)(%,6' ?C' %>,' '*JD("",6' *""!(&.'' G>!",'(D,?:6!&)' %*' %>,' :,L A*:%' !&' !D%*:' (&6' .%:*A!.'' *'%.L B.'' ?,D*B,'' B('%,:' *-' %>!'' ,B0' !&'.!J:,D%!*&' ?.%' %>,&' %>,'*"6!,:'' F!"" >!B' ?,D(.',' >,' G!"" &*%' 6,"!E,:' .A' ,&%0' %*' %>,B' -*:' A".&6,:' '' %*' %>,',",E(%!*&' *-' *'%.B.'' ?C' %>,' '!6,' *-' %>,',&(::(%!E,' G>!D>' ():,,'' !&' %>,' B(!&' G!%>' %>,' *:6!&(:C' *&,' %>(%' *'%.B.'' >(6' A,:-!6!*.'"C' ',%' ('!6,' %>,''*&' *-' (""!,&.'' ,&%:.'%,6' %*' >!'').(:6!(&'>!A''%(&6'' (&*%>,:',E!6,&%"C' !&E,&%,6' %*' D",(:' >!B' (DD*:6!&)' %*' G>!D>' %>,' A,*A"' !&' (.'' 6!6' %>!'' (&6' %>,&' *--,:,6' %>,' D:*G&' %*' *'%.L B.'' >,' %,&6,&DC' %*' ,.'*)!',' *&,' G>*' >(6' 'A(:,6' (.'' %>,'-(%,' *-' %>,' (&.?!(&' "(&6'' (&6' *-' '!(' (&6' >(6' '(E,6' !%' -:*B' %>,' ,:B(&'' D*B,'

>!B',"-'A:*D"(!B,6' ?C' >!'' B,&' (' ,BA,:*:' (&6' ?,'!,),6' !&' *"*)&,' !"E(&.'' %>,').(:6!(&' *-' %>,' ,BA,:*:'' '*& ,' G('' '.DD,''-.'' !&' D(A%.:!&)' %>,' %*G&' (&6' !&'),%%!&)' !&%*' >!'' A*G,:' >!'' -*:B,:' D*"",().,' ('' G,"'' ('' %>,' !BA,:!('' ?*C' G>,:,.A*&' >,' >(6' %>,B' ?*%>' ,@,D.%,6' .%' 6.:!&)' %>!'' D*&-.'!*&' %>,' :(&F'' ?.:'%' *E,:' %>,' >!&,' (&6' &*% B,:,"C*E,:-"*G,6' ('' (."'?.% A,&,%:(%,6' ("'*' !&%*' A(!&' (&6' !&6,,6' A!"")(),6',E,&' %>,' D*('% *-' -:!D(' **&' (-%,:L G(:6'' G>,&' %>,' D(A%.:,' *-' (",:!(&' ?C' %>,' ,:'!(&'' >(6' -!"",6' .A' %>,' B,('.:,' *-' B!'-*:%.&,' ('' %>,' *B(&' "(&6' *&' %>,'",-% ?(&F' *-' %>,' >!&,' !&' %>,' .AA,:' A:*E!&D,' G('' "*'%' A('!&) 6*.?%","'' %*' %>,' "(B(&&!' G>*',' ,:.A%!*&' !&%*' %("C' !&' %>,' "('% C,(:'' *-' (""!,&.'' &,D,''(:!"C' A:,L '.AA*','' %>!'' "*'' ' ,' !'' %>,' "('% ,BA,:*:' G>*',' &(B,' !'' -*.&6' *&' B*&.B,&%'' *&' %>,' :!)>%' *-' %>,' >!&,' !'' *!&' D,",?:(%,' >!B' *&' (DD*.&%' *-' -!E,'):,(%' E!D%*:!,'' *E,:' %>,' ,:B(&'' (&6' &*%" ,'' (:,' %>*',' *-' >!'' '.DD,''*:' !&' %>,' (""!D' :.",' *'%.B.'' -.""' *-' %>,' A:(!',' *-' %>,' ,:B(&' E!D%*:!,'' *-' %>,' 6,"!E,:,:' *-' (."' ("'!,&.'' !&' >!'' ,(:"!,:' C,(:'' >(6' %(F,&' .A' %>,' '%:.))",' *&' %>,' >!&,' &*%' G!%>*.%' ,&,:)C' (&6' *'%.B.'' G('' ,E,&' (&' ,@D,"",&%' *--!D,:' (&6' G*."6')"(6"C'>(E,'?,,&'(') **6':,),&%Ḥ ?.%' (B!6'%' %>,'.%%,:' .&:."!&,'' G>!D>' %>,&' A:,E(!",6' !&' %>,' *B(&' '%(%,' *:' :(%>,:' !&' %>,' *B(&' (:BC' %>,' %(",&%' (&6' (?!"!%C' *-' %>,' !&6!E!6.(" A:*-!%,6' &,!%>,:' >!B',"-' &*:' %>,' D*BB*&G,('%> ','.!,'' *-'-"*.:!'>!&)' *B(&' %*G&''G('' (%' %>(%' %!B,'' "(!6' 6,'*"(%,' ?C' %>,' !&E(6!&)' ?(:?(:!(&'' (&6' %>,' :!)>%' ?(&F' *-'%>,' >!&,' G('' -*:' ,E,:' "*'%' %*' %>,' *B(&'

>,' :,J,'%(?"!'>B,&%' *-' A,(D,' (&D *:6,:' !&' (.'' G('' .:,!!(&.'' A:!B(:!"C' 6,A,&6,&%' *&' %>,' D*>,'!*&' *-' %>,' ,BA!:,'),&,:(""CḤ '*' "*&)' ('' %>,' %("!(&' ,BA,:*:'' '%(%!*&,6' %>,!:' %:**A'' !&' %>,' (:?*&,&'!'' %*' ',%' ('!6,' %>,' (""!D

>,:,'(&6',E,:CG>,:,'#B*'% *?E!*.'"C' (% ' 'M9%*"!)>%Ḥ G!%>'G>!D>'!''D*&L &,D%,6'%>,'-(D% %>(% %>!'' :,A*:% F&*G'' &*%>!&)' *-'%>,' "*'' *-'%>,' :!)>% ?(&F' *-'%>,' >!&,' (&6' *-'%>,' ,@A,6!%!*&'' *-'%"%,' :(&F'' %*' (."' A(!&' (&6' -:!D(' % !'' -.:%>,:' '!)&!-!D(&% %>(% %>,' (",),6' A:*),&!%*:*-'%>,' *&J '%(&%!&!(&'>*A','!'' >,:,'A:*E!6,6'G!%> (&'>*&*.:(?","',D*&6(:C' A(:%' >!'' &(::(%!E,'&*%D*&-.',6'?.%>*:*.)>"C' -("'!-!,6'B.'%?,'D*BA",%,"C','%('!6,'H

:!E("' (&6' %>,' "(%%,:' !&' %.:&' B(6,' ('' %>*.)>' >,' G*."6' D:*'!' %>,' "A'' ,--,D%!E,' *A,:(%!*&'' ()(!&'%' %>,' ,:B(&'' G,:,' *-' %>,B',"E,' ,@D".6,6' %' G('' *&"C' (-%,:' %>(%' (?*.%' %>,' C,(:' RNR ' %>,' %>,&' :.",:' *-' (."' ,%:!D.'' G,(:C' *-' >!'' .&):(%,-."A(:%' >(6' >!B','-' ?:*.)>%' (?*.%' %>,' '.?B!''!*&' *-' >!'' %:**A'' %*' .:,"!(&.'' %>,' ,BA,:*:' :,D*)&!',6' ?C' %>,' *B(&' ',&(%,' %>(%' %>,' %>*.)>%' *-' G(:6!&)' *--' %>,' ,:B(&'' D*."6' ?,' ()(!&' ,&%,:%(!&,6' >,' :(!6'' *-' %>,' "(B(&&!' G>*'>(6' -*:' ("B*'%%,&'C,(:'' :(E(),6' .AA,:' %("C' ('' -(:'6*G&' (''' (E,&&(' >(6' (' '%*A' A.%' %*' %>,B' -*:'"*&)' ?C' %>,' '(B,' (?"','' :.",:' G;!*' >(6' ?:*.)>%' (.'' ?(DF' %*' %>,' ,BA!:,' (&6' >,' ,BA>(%!D(""C' 6,-,(%,6' *&,' *-' %>,!:' %:!?,'' %>,' +.%>.&)!' *!:' %>,' .AA,:' (&.?,' -' >!'')*E,BB,"!%' >(' "('%,6 ',' G*."6' 6*.?%L ",'' >(E, :,&,G,6' 4%>,' *%,D%! ' *-' %>,J-:*&%!,:' ("'*' !&' (."-3 -%,:' "!!'' 'A,,6C' (&6' '.66,&' ,&6' #RNM9' %>,' ,:B(&'' *&D,' B*:,' D:*'',6' %>,' >!&,'(&6'6,E('%(%,6' %>,' D*.&%:C' -(:' (&6' G!6,

:*?.' !'' '.DD,''*:' :*?.'' #-:*B' RN19' ("'*' (&' (?",'' '*"6!,:' &*%' B,:,"C' 6:*E,' %>,B' *.%' (-:,'>K >,' !'' '(!6' %*' >(E,' %(F,&' -:*B' %>,B' ',E,&%C' %*G&'K ?.%' ("'*' (6E(&D,6' ()(!&' *&' %>,' ()):,''!E,' D:*'',6' %>,' >!&,' (&6' 6:*E,' %>,' ,:B(&'' ?(DF' *E,:' %>,' ,DF(:' ' 6!6' &*%' >*GL ,E,:' :,&,G' %>,' "!&,'' *-' %>,' ,(:"!,:' %!B, ' ?.%' D*&%,&%,6

' >,':.","*-' *'%.B.'' "('%,6' %,-" C,(:''#A' /1S'&*%,'/9' >(%'%>,',"6,:' '*&' *-' ("'!,>.'' G(''(":,(6C'6,(6'!&' RMO'G,'",(B'-:*B'%>,' !&'D:!A%!*&'*-' *6,&(' ' ') ' @!' OR1'H' %>,' :,E*'%' *-' *'%.B.''%>.''-("'' D,-%(!&"C' !&' *:' ?,-*:,' %>!'' C,(:' '' %>,' D(A%!E!%C' *-' ,%:!D.'' D(&&*%' G,"" ?,' A"(D,6' "(%,:' %>(&' RNR' !BB,6!(%,"C' (-%,:' %>,' ',D*&6' ,@A,6!%!*&' ()(!&'%' X,&*?!(' (&6' %>,' %>:,' ("'!D' :.",:'' :,!)&,6' *'%.B.'' -*:' %,&' C,(:'' !D%*:!&.'' -*:'%G*' # .%:*A!.'' !@' O9' ,%:!D.'' -*:' %G*' # !D%*:' ZM9' %>!'' ?:!&)'' %>,' :,E*'%' *-' *'%.B.'' %*' '*B,G>,:,' (?*.%' RMO'H' C,%' '.D>' &.B?,:'' (:,' -:,I.,&%"C' '*B,G>(%' 6,:(&),6' >,&' %>,' 6.:(%!*&' *-' %>,',@A,6!%!*&'' *-' %>,' ,:B(&'' !&%*' A(!&' .&6,:' ("'!,&.'' !'' 6,-!&!%,"C' '%(%,6' (%' %G,"E,' C,(:'' # :*'!.'' E!!

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>(%' %>,' *DD.A(%!*&' *-' :!%(!&' D*."6' &*%',&'.,'G!%>*.%' (' D*&%,BA*:(:C' !&D:,(',' *-' %>,' '%(&6!&)' (:BC' G('' ("'*' %>,' E!,G' *-' %>*',' '%(%,'B,&' G>*')(E,' *DD('!*&' %*' !%H %>:,,' *-'%>,' >!&,J",)!*&'' (&6' *&,' -:*B' %>,' (&.?,' G,:,' 6,'%!&,6' &!>!%>,: '?.%'(%' %>,' '(B,'%!B,'%G*'&,G"C' !&'%!%.%,6' ",)!*&'' G,:,' ('' !)&,6' %*' %>,' ,:B(&!D' (:B!,'' &' (?",

3 .,%*&!.'' !#4' /N'' A,D!-!,'' (' D(.','*-' %>,' G(:P &!"" ! ' #"+' &# #&#!"&$ ' '" "' $44 '& !" .' #%! < G>!D>' ' !:'D>-,"6' ;.'%"C' ?:!&)'' !&%*' D*&&,D%!*&' G!%>' ! ' SSP' 4 " ' #" $ "' &!"" # ' $.' % ' '6#'*# #'!'*!& $'+# '$G %#!' !"#'& !" #%$!&' "'4$4& "$ ' $.' +$*& ' C' 6!,' &# # &#! ' (:,'6*.?%L ","'' B,(&% (% ",('% A:*;,D%,6',@A,6!L %!*&'' -*:' A!"",' %*' %>,' ("'!D' D*('%' >,' G(:' G('' D,:%(!&"C' &*% G(),6' *&' (DD*.&% *-' ,:!D.'' # !*'' "@' /O9

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*A,&,6 . A !- (B("*6.&.B :,D,!E,6 *B(& D*"*&!'%' *B(& %*G&'>!A' G>!D> '**& *?%(!&,6 -*:B(""C .:?(& *:)(&!'(%!*& G,:,-*:B,6 ,"',G>,:, !& %>, '*.%> *-%>, !'"(&6 (B,:, :,'."% *- -:,,6*B *-%:(--!D (&6 *-!BB!L):(%!*& A(:%!D."(:"C (% %>, >*% 'A:!&)' *- ."!' # (%>9 !& ,:."(B!.B # % "?(& %*% %>, &*:%>JG,'% *- *&6*&9 (&6 (?*E, ("" !& %>, &(%.:(,BA*:!.B *-%:(6!&)* *& ( ):,(% 'D(",K *&6!&!.B (% %>, B*.%> *-%>, >(B,'

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%*?,'N[[[[K G(' &*%",''' >,'A:*D.:(%*:')(E,'.A %>,'
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*B(&' (:BC' %** ?,D(B,' !&E*"E,6' !&' %>,' 6!'('%,:'
&.B?,:' *-''D(%%,:,6'6,%(D>B,&%'' (&6)(::!'*&'' '.DD.B?,6'
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-' -:D,' "*'%' !&' %>,' ?(%%",' ("" >!'' !&-(&%:C H %>,' D(BA' G('

: . ",H >!'' '.DD,''*:' &(,.'' + ."!.''):!D*"(' (-%,:' *?'%!&(%,'
D*&-"!D%'' G!%>' %>,' :6*E!D!' ,--,D%,6' G>(%' (.""!&.'' >(6'
&*%' (D>!,E,6' (&6' *DD.A!,6' !&' %>,' C,(:' NO' %>,' !'"(&6' *-'
&(' -%,:G(:6'' %>,:,'!''&' B,&%!*&'*-'(D%!E,':,'!'%(&D,'
!&' %>,',':,)!*&''H %>,'D(BA'*-' !:*D*&!.B'D*."6'A:*?(?"C'
(?*.%' %>!'' %!B,' ?,'6!'A,&',6' G!%>' (&6' %>,',",)!*&' %>,:,?C'
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%>,:' %G' ",)!*&(:C' D(BA'' '%!"" :,B(!&,6'*&' %>,' 'A*%'
6*G&' %*' %>,'%!B,' *-' !*D",%!(&' (&6' *&"C'6!'(AA,(:,6' !&'
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*:,*E,:'%>,' D*BA",%,' (?',&D,' *-' *B(&'%:(D,'' !&' %>,'
!&%,:!*:'*-' (",'' (&6' %>,' ,"%!D' &(%!*&("!%C' B(!&%(!&!&)'
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%*' %>,',('%' *-' !:*D*&!.B' &' D"*',' D*&%(D%' G!%>' %>!''
D(BA'!&'&*:%>' &)"(&6'G('' %>,' B*'%' A*G,:-.'' A:!&D!A("!%C'
*-' %>,' !'"(&6'%>(%' *-' %>,' :!)(&%,'' # *:F'>!:,9'H !%J'>(6'
&*%' A:*A,:"C' '.?B!%%,6' ?.%' %>,' I.,,&' (:%!B(&6.''
'*.)>%' %*' F,,A' A,(D,' G!%>' %>,' D*&I.,:*:'' (&6' '>*G,6'
>,:','-' D*BA"!(&%' %*' %>,B' >,' A(:%C' >*'%!"' %*' %>,'
B(&'' >(6' (%%,BA%,6' %' ?:,(F' "**',' >,:,' !&' %>,' C,(:'
M[' ?.%' %>,' (%%,BA%' >(6' ?,,&' I.!DF"C' '.AA:,'',6'
(:(%(D.'' ?,(%,&' !&' %>,' G,'%' >(6' >*A,6' %*' ?,' (?"," %*'
D*&%!&.,'>!'' :,'!'%(&D,'!&' %>,'&*:%>'?.%' %>,' I.,,&'6,"!E,:,6'
>!B' (' (":,(6C' '%(%,6' %*' %>,' *B(&'' >,'' !&%,:&(" '
6!'',&'!*&' (&S' 6*B,'%!D' I.(::,"'' B.'%' >(E,' A(:%"C'
!&%,:-,:,6' G!%>' %>,' :!'!&)' ()(!&'%' (.""!&.'' !&' G>!D>' G,'
-!&6' %>,' :!)(&%,'' !&' (' ",(6!&)' A*'!%!*&' (&6' G>!D>' -,""
G!%>' ("" !%'' G,!)>%' .A*&' %>!'' E,:C' ",)!*&' *-' %>,' &*:%>'
,(&G>!"' %>,' *B(&' A(:%C' *-' %>,' :!)(&%,'' >*G,E,:'
G('' !&-".,&%!(" ,&*.)>' %*' *?%(!&' %>,' :,'%*:(%!*&' *-' %>,'
)*E,:&B,&%' *-' (:%!B(&6.'' (-%,:' %>,' !&'.::,D%!*&' G('
6,-,(%,6' .%' '*B,' C,(:'' (-%,:G(:6'' %>,' A(%:!*%!D' A(:%C'
%>,:,' '.AA*:%,6' ?C'%>,' G(%D>G*:6' *-' :,E*"%' -:*B' *B,

G>!D>' 6.:!&)' 2%>,' D!E!'' G(:' (-%,:' %>,' 6*G&-(''' *-' ,:*'
-!'',6' (''' %>,2G,'%' ?:*.)>%' (?*.%' (' &,G' :!'!&)' *-' %>,'
:!)(&%,'' (!&'%' %>,' -*:,!)&' :.",' (%' %>,' >,(6' *-'G>!D>'
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?C' >,:K E,%,:(&'G(::!*:' ,&.%!.'' %'G('' *&"C' (-%,:'
A:*"*&),%'' D*&-"!D%'' %>(%' %>,' B!)>%C'A,*A",'G('' '.?6.,6'
?C' ""!.'' ,:!("!'' %>,'' '(B,'G>*'>(6'-*.)>%' .&'.DD,''L
-.""C'.&6,:' (.""!&.'' ()(!&'%' %>,',''(B,' :!%*&'' &*G'*&,'
%>,' B*'%' &*%,6'),&,:("'' *-' ,'A('!(&' (&6' %>,' -!:'%'
)*E,:&*:' *-'%>,'!'"(&6'&*B!&(%,6'?C'>!B' >,'):(6.(""C'
'"(DF,&!&)' :,'!'%(&D,' *-' %>,' G,'%' B(6,' !%' A*''!?",' %*'
D*B?!&,'*&,'*-'%>,'%>:,',",)!*&''>!%>,:%*'%(%!*&,6'%>,:,'
G!%>' %>(%' '%(%!*&,6' !&' ;&6.B' (&6' %*' (6E(&D,' %>,'
D(BA' !%',"-' -:*B' !&6.B' %*' %>,' D>!,-'A"(D,' *-' %>,'
:!)(&%,'' ?.:(D.B' # *:F9' .%''*' "*&)' (' %>,' G,'%'
--,:,6' ',:!.'' :,'!'%(&D,'&*%>!&)' -.:%>,:'G(''6*&,'!&'%>,'
&*:%>' -*:' %>,' ,@%,&'!*!h' *-' %>,' *B(&'?*.&6''H (%' %>,'
(",6*&!(&'-*:,'%''(C'' (&'(.%>*:'*-'%>,'%!B,'*-' ,'A('!(&'
%>,' *B(&'(:B'' G,:,'(::,'%,6'-*:'%>!:%C'C,(:'
%'G(''):!D*"('G>*' -!:'%'(-%,:' >!'' G*:F'G('' *E,:' !&'):!D*"('
%>,' G,'%' ,&,:),%!D(""C' ',%' >!B',"-' %*' %>,'' '.?;.)(%!*&'("'*
-' %>,' &:%>' !:'%'*-'(""' >,' D:,(%,6'-*:'>!B',"-'(' -",,%'
G!%>*.%' G>!D>' %>,' A:*E!'!*&!&)' *-' %>,' %:**A'' !&' %>,',',
B*.&%(!&'' G>!D>' (--*:6,6'-,G''.AA"!,''G*."6' >(E,'?,,&
!BA*''!?",' .AA*:%,6'?C'%>!'-",,%' >,':,(D>,6'.&6,:' !%.''
#0[9'('-(:'('%>,' ,'%.(:C'*-'%>,' (E('#:!%>'*-' (C9'!&%*'
%>,':,)!*&'*-' ,:%>' (&6' .&6,,' (&6' ,BA"*C,6'%>,'%>:,,'
-*""*G!&)'D(BA(!)&''!&')(!&!&)'(&',@(D%F&*G",6),'*-'%>,'
G!6,'6!'%:!D%'' ?,%G,,&' %>!'' -:!%>' (&6'%>,'A:,E!*.'' *B(&'
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"*D('' :,'!'%(&D,' (:!6' !&' D*&'%:.D%!&)' !&%:,&D>B:!&%'' (%' %>,'
-!%%!&)' A"(D,''H G!%>' :,-,:,&D,' %*' G>!D>'!&' A(:%!D."(:' %>,'
&(%.:('' "!&,' *-'6,-,&D,' G>!D>'!'' -*:B,6'?C'%>,' %G*' -:!%>''
:.&&!&)' 6,,A"C' !&%*' %>,' "(&6' *-' "*%(' # "C6,9' &,(:'
"(')*G' (&6' *6*%:!(' # *:%>9' &,(:' 6!&?.:)>' G(''
',",D%,6'-*:' %>,':,',:E,' >!'' (6E(&D,' D(",6' %>,' G>*",'
!)>"(&6'' .&6,:' (:B'H ?.%' %>,' B!)>%C'?(%%",'G>!D>' %>,'
.&!%,6' (",6*&!(&'%:!?,'' *--,:,6' %*' %>,'',)!*&'' ?,%G,,&'
%>,' %G*' -:!%>'' *-' *:%>' (&6' (C' (%' %>,' :(.A!(&

B*.&%(!&' ,&6,6 G!%> %>, E!D%*:C *-):! g DD*:6L
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(&6 !& -(E*.:* - %>(% D*.:', %>,:, B!)>% G!%>
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!'"(&6 >(6 ?:*.)>% (?*.% G!%> :,'A,D% %*
*E,: G!%> (& ,&,:),%!D D(::C!&) *.% *- %>, *DD.A(& *-
%>, !'"(&6' ((G>*", %>, ,@A,&6!%.:, *- B ,& (&6
-*: %>, -.%.:, G*."6 A:*?(?"C ?, :,6.D,6
(",6*&!(>, *B(&)*E,:&B ,&% 6!6 &*% -*"'"*G %>, ', D*.&', "'
(?(&6*&,6 *G -(:A,:'*&((&6 'A!%,-. B*%!E, B (C >(E, D*J*A,:(%,6
!& %>, :,D("" *- %>, E!D%*:!*.),&,:(!& %>, C,(: 0M G>*
-*: %>(% B(%%,: >(6 :,B(!&,6 "*&),: !& *--!D, %>(& G('
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>, D*!&D!6,&D, *- %>, "('% E!D%*:!, ' *- %>,),&,:(!&
D*%"(&6 (&6 %>, -!:'% 6,-,(' *- %>, , BA,:*: !& %>, :,)!*&
*- %>, (&.?, G(D,:%(!&"C !& (>!)> 6,):,, (&&*C!&)
.% -*: %>, A.%%!&) ('%*A %* %>, *A,:(%!*&' !& :!%(!&
(&6 -*: %>, D(""!&) (G(C G>!D> (AA(:,&%"C %>,& ,&'.,6
*- *&, *- %>, -*.: ,)!*&' G!%> G>!D>):!D*"(>(6
,@,D.%,6 >!' D(BA(!)&' %* (&&*&!((I.!%, '.--!D!,&%
,@A"(&(%!*& !' -.:&!'>,6 ?C %>, B!"!%(:C A*'!%!*& *-* %>,
'%(%, (% %>(% %!B,K %>, ,@%,&'!*& *-* %>, *B(&:.", %*
%>, :!)>% ?(&F *- %>, >!&, !& .AA,: ,:B(&C (&6 %>,
*.%?:,(F *-%>, 6(&),:*.'G(:'!& (&&*&!(>!' !&6,,6
6*, &*% ,@A"(!& G>C G!%>(" (& ,&6 '>*."6 ?, A.% %*
%>, A:,''!&) -*:G(:6 %*G(:6' %>, &*:%> (&6 &*:%>,:&
D*%"(&6 ('G, " (:,"(&6 '>*."6 ?, ",-% %* %>,B ,"E,'
:*?(?", >(% %>,&D,-*:%> %>,)*E,:&B ,&% 6,'!'%,6 &*% *&
):*.&6' (DD*.&% *- (DD!6,&%'*- %>, '!%.(%!*&-*: %>, B*B ,&% ?.%
-*:%>!' *&D, -*:('"-:*B A.'>!&)-*:G(:6 %>, -:*&%!,:*-%>, , BA!:,
A*"!DC (&6 (B!6'% (" D>(&), *- A,:'*&' (6>,:,6 %* %>!' D*.:',
G, (:, %(.)>% ?C %>, G>*", "(%,:>!'%*:C *- %>, !'"(&6 (&6
%(.)>%, 'A,D!(""C ?C %>, "(?*:!*.' (&6 D*'%"C G(""J'%:.D%.:, '
%* ?, B,&%!*&,6 !B B,6!(%,"C >,%>,: %>, D*BA",%!*&
-%>, D&I.,'% G(':,&*.&D,6 ?C %>, B !& %>, %:.,!&%,:,'%
- %>, '%(%, !' (&%>,: I.,'%!*& >(% %>, !BA,:!("

-!&(&D,'' G*."6' *&"C' '.--,:' "*''' ?C' %>!'' ,@%,&'!*&' *-' %>,' ?*.&6'' G('' ,E,&' &*G' .:),6' I.!%,' ('' B.D>' ('' !%' -*:B,:"C' G('' ()(!&'%' %>,' *DD.A(%!*&' *-' %>,' !'"(&6' !%',"-H ?.%' D*."6' &*%' ?,' 6,D!'!E,' *-' %>,' B(%%,: ' &' (' B!"!%(:C' A*!&%' *-' E!,G' %>,' *DD.A(%!*&' G('' D(A(?",' *-' ?,!&)' D(::!,6' *.%' (''):!D*"(' >(6' D*&D,!E,6' !%' ?,C*&6' 6*.?%' G!%>*.%' B(%,:!("' 6!--!D."%C' .%' %>,'D*&'!6,:(%!*&' B!)>%'%.:&' %>,' 'D(",' %>(%' %>,' *B(&!'!&)' *-' %>,' :,)!*&'' '%!"'' -:,' G*."6' >(E,' %*' ,&L D*.&%,:'):,(%' 6!--!D."%C' *&' (DD*.&%' *-' %>,' 6!E,:'!%C' *-' :(D,' >,' ,"%'' !&' &)"(&6' A:*A,:'?,"*&),6' %>:*.)>*.%'%*' %>*',' *-' %>,'D*&%!&,&%H &(%!*&(" &(B,'-(!%>'"(&).(),'G,:,'D*BL B*&' %*' ?*%>' -' %>,' ,"%!D' &(%!*&("!%C' *-' %>,' D*&%!&,&%' >(6' -*.&6' (''.AA*:%' !&' %>,' !'"(&6' *&' %>,' *%>,:' >(&6' %>,' *B(&!'!&)' *-' (."&,D,''(:!"C' D(::!,6' !%'' !&-".,&D,' *E,:' %*' &)"(&6' (&6' %*' %>!'' ,'A,D!(""C' *B,' *G,6' %>,' -(D%' %>(%' :!%(!&'?,D(B,' *B(&!',6'G!%>' '*' '.:A:!'!&)':(A!6!%C' .%' %>,' &(%!E,'' *-' :,"(&6' (&6' D*%"(&6' ?,"*&),6' %*' (&*%>,:' '%*DF' (&6' 'A*F,' (&*%>,:' "(&).(),H %>,' :!%*&' .&6,:'%**6' %>,!:' (,"!D' A:*?(?"C' (''' "!%%"," (''' %>,' ,:B(&' .&6,:'%**6' %>,' "(&).(),' *-' %>,' D(&6!&(E!(&'' ' >,' (",6*&!(&'K G!%>' %>,' E,:&!' %>,' *B(&'' >(:6"C' D(B,' !&%*' D*&%(D%K (:,' 6,'D:!?,6' %>:*.)>*.%' (''' ?(:?(:!(&'' *-' %>,' G!"6,'%' %CA,' &' %>,' *%>,:' >(&6' %>,' A:!,'%' *-' %>,' *(F' # ,:GC66' > # 4!F' ,@,:D!',6 >!'' *--!D,' *&' %>,' >*&,' (''!&' &)",',C' ?.%' &*%' !&' %>,' !'"(&6' *-' %>,' G,'%' &*:'!&' %>,' B*.&%(!&'' *-' %>,' &*:%>' -' %>,' *B(&'' >(6' G(),6' %>,' G(:'D>!,-"C' %*' ?:!&)' %>,' 6*B(!&' *-' %>,' :.!6'' ,&%!:,"C' !&%*' %>,!:' A*G,:' %>!'' (!B' G('' !&' '*B,' B,('.:,' (%%(!&,6' ,C*&6' 6*.?%' (%' (&*%>,:' %!B,' (''' %>,',' D*&'!6,:(%!*&'' G*."6' &*%' >(E,' !&6.D,6' %>,' *B(&' %*' :,&*.&D,' %>,',(J-:*&%!,:' *&' %>,' &*:%>' G>,&' ?:*.)>%' '*' &,(:' %*' %>,B' (&6' (%' ",('%' (",6*&!(' G*."6' >(E,' ?,,&' *DD.A!,6' .%' %>,' *B,' *-' %>(%' %!B,' G('' &*' "*&),:' (?"," %*' ",(E,&' -(:%>,:' :,)!*&'' G!%>' *B(&' >(?!%'' H %>,' A:*6.D%!E,' A*G,:' (&6' %>,' A:*):,''!E,' 'A!:!%' *-' %>,' A,*A",' >(6' 6!'(AA,(:,6

' >,'!BA,:!("-!&(&D,J*--!D!("..&6,:' '-*' $ * * ' ! ' B! =' ?' *' !.'' AA!(&'A* $ 'M9':,B(:F''%>(%' G =+ =' >!''G(''%>,'(&'G,:'*-' %>,' %>,' *B(&'' >(6' *DD.A!,6' %>,' ?,'%')*E,:&B,&%(" '%(--' %*'):!D*"(' (&6' A(:%' : @ *X 5 =' *-' %>,' :!%!'>' '.D>'('' '>(:,6'>!'' *A!&!*& !'"(&6'' ' :-!'' -!YY!;" $4 $= ' ZJ

-:*B' !%' %' ",('%'%>(%' '*:%' *-' D*&I.,'%' G>!D>' D(&&*%' ?,' ,&-*:D,6' ?C' 6,D:,,'' (&6' B(:D>,'' G*."6' >(E,' >(:6"C' '.DD,,6,6' >(6' %>,C' (%%,BA%,6' !%

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(Neath) and from Deva to the point of crossing to Mona.

Roman manners and culture.

Roman Britain sustained a relation to Romanising similar to that of northern and central Gaul. The national deities, the Mars Belatucadrus or Cocidius, the goddess Sulis treated as equivalent to Minerva, after whom the modern city of Bath was named, still received much ...rship on the island even in the Latin language. The ...age and manners that penetrated thither from Italy ...et more an exotic growth on the island than ...continent; still towards the close of the first ...he families of note there shunned as well the ...nguage as the Latin dress. The great urban ...e seats proper of the new culture, were more ...eloped in Britain; we do not precisely know ... town served as seat for the *concilium* of the ...d for the common worship of the emperor, or ...h of the three legion-camps the governor of the ...e resided; if, as it seems, the civil capital of ...n was Camalodunum, and the military capital Ebu-...n,[1] the latter can as little measure itself with Mentz ...e former with Lyons. The ruined sites even of ...f note, of the Claudian veteran-town Camalodunum, ...e populous mercantile town Londinium, and not less the camps of the legions for several hundred years, at Deva, Isca, Eburacum, present inscribed stones only in trifling number; towns of name with Roman rights like the colony Glevum (Gloucester), and the *municipium* Verulamium, have hitherto yielded not a single one; the custom of setting up memorial-stones, on the results of which we are for such questions largely dependent, never rightly prevailed in Britain. In the interior of Wales and in other less accessible districts no Roman monuments at all have come to light. But there exist withal

[1] The command stationed here was, at least in later times, without question the most important among the Britannic; and there is also mention here (for it is beyond doubt Eburacum that is in view) of a *Palatium* (*Vita Severi*, 22). The *praetorium*, situated probably on the coast below Eburacum (*Itin. Ant.* p. 466), may have been the summer seat of the governor.

clear traces of the stirring commerce and traffic brought into prominence by Tacitus, such as the numerous drinking-cups which have come out of the ruins of London, and the London network of roads. If Agricola exerted himself to transplant municipal emulation in the embellishment of one's native city by buildings and monuments to Britain, as it had been transferred from Italy to Africa and Spain, and to induce the islanders of note to ado the markets of their home and to erect temples palaces, as this was usual elsewhere, he was but in a degree successful as regards the public buildings. was otherwise as regards private economics; th country-houses constructed and embellished in fashion, of which now nothing is left but the mo ments, are found in southern Britain—so far n region of York[1]—as frequently as in the land The higher scholastic training of youth penetrat from Gaul into Britain. It is specified among Ag administrative successes that the Roman tutor b find his way into the leading houses of the island Hadrian's time Britain is described as a region conqu by the Gallic schoolmasters, and "even Thule spea hiring a professor for itself." These schoolmaste in the first instance Latin, but Greeks also came; t tells of a conversation which he held at Delphi wit a Greek teacher of languages from Tarsus returning home from Britain. If in modern England, apart from Wales and Cumberland, the old native language has disappeared, it has given way not to the Angles or to the Saxons, but to the Roman idiom; and, as usually happens in border-lands, in the later imperial period no one stood more faithfully by Rome than the man of Britain. It was not Britain that gave up Rome, but Rome that gave up Britain—the last that we learn of the island is the urgent entreaty of the population addressed to the emperor Honorius for protection against the Saxons, and his answer, that they might help themselves as best they could.

[1] None have been found to the north of Aldborough and Easingwold (both somewhat north of York). See Bruce, *The Roman Wall*, p. 61.

CHAPTER VI.

THE DANUBIAN LANDS AND THE WARS ON THE DANUBE.

As the frontier on the Rhine was the work of Caesar, so the frontier on the Danube was the work of Augustus. When he came to the helm, the Romans were in the Italian peninsula hardly masters of the Alps, and in the Greek peninsula hardly masters of the Haemus (Balkan) and of the coast districts along the Adriatic and the Black Sea; nowhere did their territory reach the mighty stream which separates southern from northern Europe. As well northern Italy as the Illyrian and Pontic commercial towns, and still more the civilised provinces of Macedonia and Thrace, were constantly exposed to the predatory expedition of the rude and restless neighbouring tribes. When Augustus died there were substituted for the one province of Illyricum, which had barely attained to independent administration, five great Roman administrative districts, Raetia, Noricum, Lower Illyria or Pannonia, Upper Illyria or Dalmatia, and Moesia; and the Danube became in its whole course, if not everywhere the military, at any rate the political, frontier of the empire. The comparatively easy subjugation of these wide territories, as well as the grave insurrection of the years 6-9, and the abandonment, thereby occasioned, of the formerly cherished purpose of shifting the boundary-line from the upper Danube to Bohemia and to the Elbe, have been formerly described It remains that we should set forth the development of these provinces in the time after Augustus and the relations of the Romans to the tribes dwelling beyond the Danube.

Arrangements of Augustus.

Late civilisation in Raetia.

The destinies of Raetia were so closely interwoven with those of the upper German province that we might refer for them to the earlier narrative. Roman civilisation here, taken as a whole, underwent but little development. The highlands of the Alps with the valleys of the upper Inn and the upper Rhine embraced a weak and peculiar population, probably the same as had once possessed the eastern half of the north-Italian plain, perhaps akin to the Etruscans. Driven back thence by the Celts, and perhaps also by the Illyrici, it held its ground in the northern mountains. While the valleys opening to the south, like that of the Adige, were attached to Italy, these offered to the southerns little room and still less incitement for settlement and founding of towns. Farther northward on the plateau between the lake of Constance and the Inn, which was occupied by the Celtic tribes of the Vindelici, there would doubtless have been room and place for Roman culture; but apparently in this region, which could not become, like the Norican, an immediate continuation of Italy, and which, like the adjacent so-called Decumates-land, was probably in the first instance of value for the Romans merely as separating them from the Germans, the policy of the earlier imperial period had rather repressed culture. We have already indicated (p. 18) that immediately after the conquest there were thoughts of depopulating the district. Alongside of this lies the fact, that in the earlier imperial period no community with Roman organisation originated here. It is true that the founding of Augusta Vindelicorum, the modern Augsburg, was a necessary part of the laying out of the great road which was carried, simultaneously with the conquest itself, by the elder Drusus through the high Alps to the Danube (pp. 19, 20); but this rapidly flourishing place was, and remained for above a century, a market-village, till at length Hadrian in this respect left the path prescribed by Augustus and made the land of the Vindelici share in the Romanising of the north. The bestowal of Roman urban rights on the chief place of the Vindelici by Hadrian may be connected

with the fact that, nearly about the same time, the military frontier was pushed forward on the upper Rhine, and Roman towns arose in the former Decumates-land; nevertheless in Raetia ever afterwards Augusta remained the only larger centre of Roman civilisation. The military arrangements exercised an influence in keeping it back. The province was from the first under imperial administration, and could not be left without a garrison; but special considerations, as we have formerly shown, compelled the government to send to Raetia simply troops of the second class, and, though these were not inconsiderable in number, the smaller headquarters of *alae* and *cohortes* could not have exercised a civilising and town-forming effect like the camp of the legion. Under Marcus certainly, in consequence of the Marcomanian war, the Raetian headquarters, Castra Regina, the modern Ratisbon, was occupied by a legion; but even this place appears to have remained in the Roman time a mere military settlement, and hardly to have stood on a line in urban development with the camps of second rank on the Rhine, such as *e.g.* Bonna.

The Raetian Limes.

That the frontier of Raetia was already in Trajan's time pushed forward from Ratisbon westward some distance beyond the Danube, has already been observed (p. 158); and it has been there also shown that this territory was probably annexed to the empire without applying force of arms, similarly with the Decumates-land. It was likewise already mentioned that the fortifying of this territory was perhaps connected with the incursions of the Chatti extending thus far under Marcus, as also that these and subsequently the Alamanni in the third century visited as well this country in front as Raetia itself, and ultimately under Gallienus wrested it from the Romans.

The Italising of Noricum.

The neighbouring province of Noricum was doubtless in the provincial arrangement treated similarly to Raetia, but in other respects had a different development. In no direction was Italy so open for land-traffic as towards the north-east; the commercial relations of Aquileia, as well through Friuli with the upper Danube and with the iron-

works of Noreia, as over the Julian Alps with the valley of the Save, here paved the way for the Augustan extension of the frontier as nowhere else in the region of the Danube. Nauportus (Upper Laybach) beyond the pass was a Roman trading village already in the time of the republic; Emona (Laybach), a Roman burgess-colony, afterwards formally incorporated with Italy, but substantially belonging to Italy from the time of its foundation by Augustus. Hence, as has already been noticed (p. 18), the mere proclamation was probably enough for the conversion of this "kingdom" into a Roman province. The population, originally doubtless Illyrian, [illegible] in good part Celtic, shows no trace of that adh[illegible] the national ways and language which we perce[illegible] the Celts of the west. Roman language and [illegible] manners must have found early entrance here; and [illegible] emperor Claudius the whole territory, even the [illegible] portion separated by the Tauern chain from the [illegible] the Drave, was organised in accordance with the [illegible] municipal constitution. While in the neighbouring lands of Raetia and Pannonia the monuments of Roman language are either wanting or appear withal only at the larger centres, the valleys of the Drave, the Mur, and the Salzach and their affluents are filled far up into the mountains with evidences of the Romanising which here took deep hold. Noricum adjoined, and was as it were a part of, Italy; in the levy for the legions and for the guard, so long as the Italians were here at all preferred, this preference was extended to no other province so fully as to this.

As respects military occupation what [illegible]plies to Raetia applies also to Noricum. For the reas[illegible] developed there was in Noricum, during the [illegible] centuries of the empire, only a camp of *alae* and *cohorte* Carnuntum (Petronell, near Vienna), which in the Augusta age belonged to Noricum, was, when the Illyrian legio were sent thither, annexed for that very reason to Pa nonia. The smaller Norican encampments on the Danu and even the camp of Lauriacum (near Enns), institu

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A*''!?"C' .&6, :' , :*' *!:' %>, ' D*&J %>, ' !&'D:!A%!*&' (%%, '%!&)' '.D>' (' '%:.DJ'
'%:.D%!*&' *:', @%, &'!*&' *-'%>!'' D(BA'?C' %.:, ' *-' (:&.&%.B' 6(%!&)' -:*B' %>, '
, 'A('!(&' G, ' >(E, ' %>, ' , E!6, &D, ' *-' C, (:' ' # !:'D>-, "6' 2' *9

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I . ,&D, * - %>, * B (& A: *E!&D!(6!E!'!*& >(.'%!B(%,"; : ,%(!&,6 %>, &(B, >:(D!(& (G,"" (%>, *,'!(& ?,L %G, ,& %>, ("F(& (&6 %>, (&.?, (&6 &*% ",' %>, ,%(*: (6 *& %>, *%>, : ?(&F *- %>, (&.?, ("" 'A*F, *&, (&6 %>, '(B, "(&).(), >!'"(&).(), >(6!& %>, *B(& ,BA!:, (A*'!%!*& '!B!"(: %* %>(% *- %>, ,"%' (&6 *- %>, C:!(&' >, >!'%*:!(& (&6),*):(A>, : *- %>, .).'%(& (), %:(?* B ,&%!*& %>, "!F,&,' * - "(&).(), (B*&) %>, A,*A", & (B ,6 !& ?*%(&!D(G:!%!&) * - %>, !BA, :!(A, :!*6 %>, (D!(& (AA, "(%!*& * - (&.B?, : *- A"(&% (:, 'A,D!-!,6 >,& >! D*&%, BA*:(:C %>, A*,% E!6 >(6 *AA*:%.&!%C)!E,& %* >!B !& %>, -(:J*-!- *?:.6'D>(%* :,-", D% *& >! %** 6!' "*.%, D* .:', * - "!-, >, .', 6 >! ", !'.:, %* ", (:& ,%!D (&6 ?, D(B, ("B * '%(A*, % * - %>, ,%(, HK

" 1 2 3 $! " # - " "

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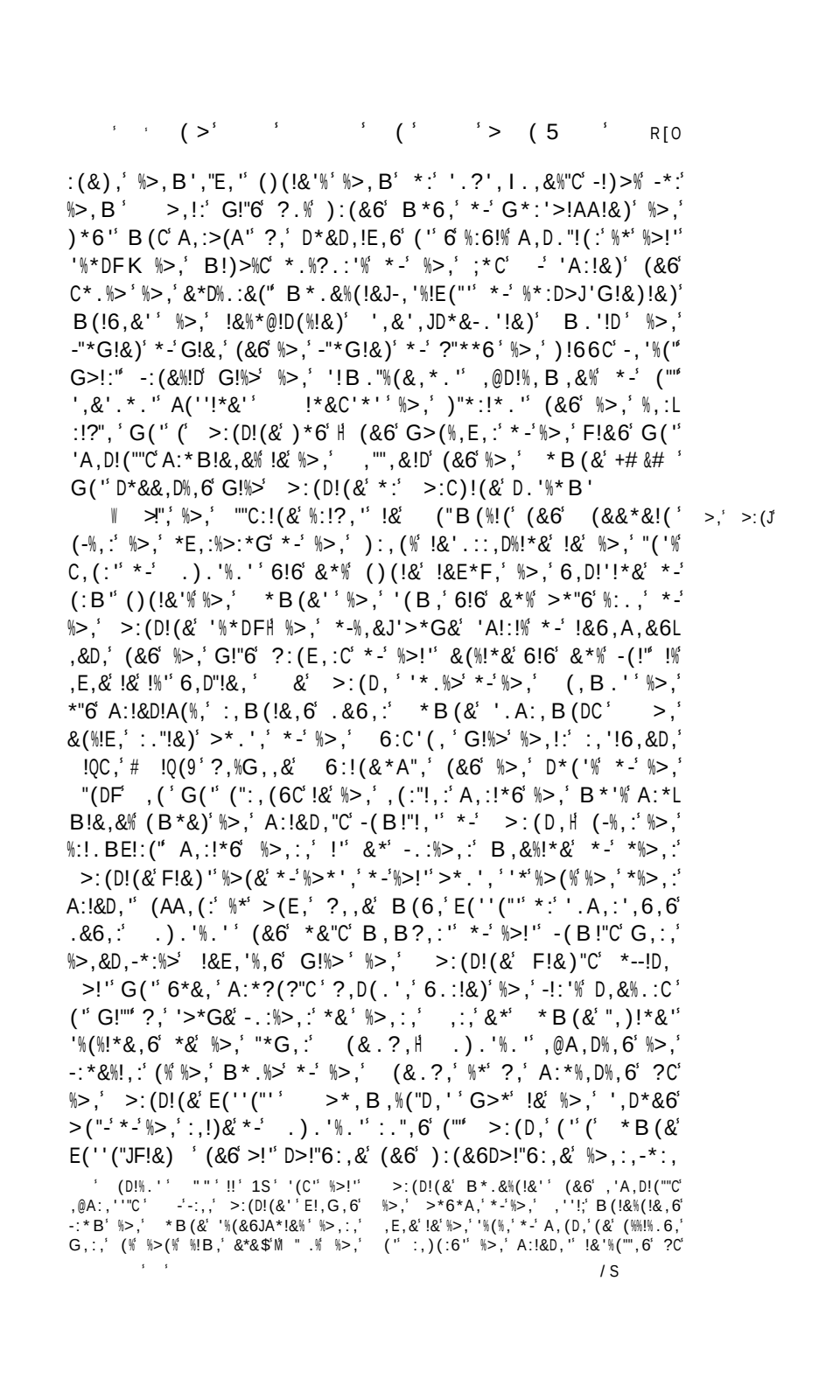
' ,'F&*G'G>*", ' ', %'*- >:(D!(& ,%!D (D!(& &(B, '*- A"(D, '" (&6 A, :'*&' , B(:F(?", '!& (' "!&).!'%!D' A*!&% *- E!, G!'' ('):*. A' *- A, :'*&(" &(B, '' D*BA*. &6, 6 G!%>K +$"&-# '2 &-B$"&-# ' , !+$"&-# ' > !+$".' &-# ' ! +$"&-# ') " +$"&-# 'A # ' 4$ ' $ ' E!' / NO9 *- G>!D>' %>, -!: '% %G* ("'*- :, I . ,&%"C *DD. : ' !'*"(%, 6 !& %>, !: ' *%>, : >("- A &-# ', *!F' '!B!"(: ' :*. A' !'' -*:B, 6 ?C %>, ' D*BL A*. &6 ''G!%>K * ' '. D>' ('' #+!* #(' >:(D!(& # ' + ' ('' (D!(& !& &. B, :*. '' D(', '9 $& * ' -! B'. ' * &- * 4 *



R/[' > (5 (') (> '

A"(C,6' !&' %>!'' D*.&%:C' &,(:"C' %>,' '(B,' A(:%' ('' ,:*6' (&6' >!'' 6,'D,&6(&%'' !&' (",'%!&,' H .&D*&6!%!*&('# 6,E*%,6&,''' %*G(:6'' %>,' "*:6JA(:(B*.&%' (' 6,D!6,6' !&D"!&(%!*&' %*' *B(&' >(?!%'' >*'%!"!%C' %*' %>,!:' *G&' D*.&%:CB,&' G>*' D".&)' %*' %>,' &(%!*&('# !&6,A,&6,&D,' B(:F' %>,' (%%!%.6,' *-' %>,' >:(D!(&' :."!&)' >*.',' >,'):,(% >:(D!(&' !&'.:L :,D%!*&' *-' %>,' C,(:'' NS/JNSZ' *-' G>!D>' G,' >(E,' -*:B,:"C' 'A*F,&' #A' RS9' G('' 6!:,D%,6' !&' %>,' -!:'%' !&'%(&D,' ()(!&'% %>!'' >*,B,%("D,'' (&6' >!'' ?:*%>,:' (&6' D*J:,),&% *%C'' G>*' A,:!'>,6' !&' !%' (&6' ('' >,' (% %>(% %!B,' G('' !&6,?%,6' %*' %>,' *B(&'' -*:' :,!&'%(%,B,&% !&%*' >!'' 6*B!&!*&' '*' >,' '*B,' C,(:'' (-%,:G(:6'' :,&6,:,6' %*' %>,B' >!'' %>(&F'' G>,&' *&' *DD('!*&' *-' %>,' :!'!&)' *-' %>,' ("B(%!(&'' (&6' %>,' (&&*&!(&'' %*' G>!D>' >!''' (D!(&' F!&'B,&' (6>,:,6' >,' F,A% -(!%>-."C' %*' %>,' *B(&'' (&6' ?*:,'(&',''',&%!('# A(:%' !&' !%'' *E,:%>:*G' !'' '*&' *%C'' G('' B*:,' *B(&'' *:':(%>,:' :,,F' %>(&' >:(D!(&' H >,' %:(D,6' ?(DF' >!'' A,6!):,,' %*' .B*"A.'' (&6' :!D>%>*&!.'' (&6')(!&,6' %>,' >(&6' *-' (' F!&'G*B(&' *-' %>,' !BA,:!('# >*.','%>,'):,(%'):(&66(.)>%,:' *-' %>,' %:!.BE!:' &%*&!.''H (&6' &*%' B,:,"C' 6!6' %>,' :,,F' (&6' (%!&' A*,%'' *-' >!'' %!B,' (66:,''' >!B' !&' '*&)' ?.%' >,' >!B','-' G('' ("# ?.%(DD*.&%,6' (' ,%!D' A*,% ' >,' "('%' *-' %>,' >:(D!(&' F!&)'' >*,B,%("D,'' '*&' *-'%>,' ,(:"C' 6,LD,(',6' *%C'' G('' :,(:,6' !&' *B,' (&6' "!F,' %>,' ,:*6!(&'):!AA(' (' C*.%>-.# A"(CB(%,' *-' %>,' ,BA,:*:' (!.'

:*E!&D,' *-' >:(D, .%' %>,' >:(D!(&' &(%!*&' ?C' &*' B,(&' '>(:,6' %>,' *B(&' ",(&!&)'' *-' %>,':."!&)' >*.',' (&6' %>,')*E,:&B,&%):(6.(""C' ?,D(B,' D*&E!&D,6' !&' >:(D,' ('' !&' (",'%!&,' %>(% %>,' %*%%,:!&)' E(''("J%>:*&,' *&"C' B(!&%(!&,6' ?C' D*&'%(&% !&%,:L -,:,&D,' *-' %>,' A:*%,D%!&)' A*G,:' G('' *-' .',' &,!%>,:' -*:' %>,B' &*:' -*:' %>,' D*.&%:C' (&6' %>(% %>,' !&%:*6.D%!*&' *-' 6!:,D% (6B!&!'%:(%!*&' G('' !&' ,E,:C' :,'A,D% %*' ?,' A:,-,::,6' >,' ,&!A,:*:' !?,:!.'' B(6,' . ,' *-' %>,' I.(::,"'' %>(% (:*',' !&' %>,' >:(D!(&' :*C('# >*.',' %*' ',&6' %*' >:(D,' !&' %>,'

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C,(:' /O' (' *B(&')*E,:&*:' !%.'' :,?,"",&.'' .-.'' .&6,:' D*E,:' *-' ,@,:D!'!&)').(:6!(&'>!A' *E,:'%>,' A:!&D,'' %>(%'G,:,' B!&*:'' ,%' %>!'' *DD.A(%!*&' G('' &*%' (DD*BA"!'>,6' G!%>L *.%' :,'!'%(&D,' !&,--,D%.('' 6*.?%","'' ' ?.%' ',:!*.'' *&' %>,' A(:%' *-' %>,' A,*A",' G>*' A(:%!D."(:"C' !&' %>,' B*.&%(!&J' E("",C'' %:*.?",6' %>,B','E,'' "!%%",' (?*.%' %>,' :.",:'' (AL A*!&%,6' ?C' *B,' (&6' G>*',' -*:D,'' ",6' ?C' %>,!:' -(B!"CJ' D>!,-'' >(:6"C'-,"%%>,B','E,'' %*' ?,' '*"6!,:'' *-' %>,' F!&)' (&6' '%!"'' ",'' '*"6!,:'' *-' *B,' >,' ',&6!&)' *-' :,?,"",&.'' D("",6' -*:%>' !& %>,' C,(:' R / (' :!'!&)' !& G>!D>' &*% B,:,"C' 6!6' %>,' B*'% &*%,6' >:(D!(&' %:!?,'' %(F,' A(:% ?.% G>!D>' %>:,(%,&,6' %*' ('' .B,'):,(%,:' A:*A*:%!*&'' H B,'',&),:'' *-' %>,' !&'.:),&%'' G,&% *E,:' %>,' (,B.'' %*' ,&F!&6",' %>,' &(%!*&('' G(:' !& *,'!(' (&6' A,:>(A'' '%!"'' -.:%>,:' ,(&L G>!",' %>,' *,'!(&' ",)!*&'' (AA,(:,6' !&' :!)>% %!B,' %*' :,"!,E,' >!"!AA*A*"!'' G>!D>' %>,' !&'.:),&%'' ?,'!,),6' (&6' %*' '.AA:,'' %>,' B*E,B,&%' .%' G>,&' '*B,' C,(:'' "(%,:' #RM9' %>,' *B(&')*E,:&B,&% *:6,:,6' ",E!,'' !& >:(D,' %>,' B,&' :,-.',6' %*' ',:E,' ?,C*&6' %>,' ?*.&6'' *-' %>,!:' *G& D*.&%:C' >,& &*' :,)(:6' G('' A(!6' %*' %>!'' :,-.'("'' %>,' G>*"," B*.&%(!&'' :*',' (&6' (' '%:.))",' *-' 6,'A(!:' ,&'.,6' !& G>!D>' %>,' !&'.:),&%'' D*&'%:(!&,6' (% ",&)%>' ?C' >.&),:' (&6' %>!:'% %>:,G' %>,B','E,'' !&):,(%' A(:% *& %>,' 'G*:6'' *-' %>,' ,&,BC' *:' *& %>,!:' *G& (&6' A:,-,::,6' %*' :,&*.&D,'' "!-,' :(%>,:' %>(& %>,!:' %!B,J>*&*.:,6' -:,,6*B' >,' 6!:,D%)*E,:&B,&% D*&%!&.,6' !& %>,' -*:B' *-' ,@,:D!'!&)' G(:6'>!A' !& >:(D,' .A' %*' %>,' 6,(%>' *-' !?,:!.'' H (&6' !-' %>,' ,BA,:*:' (!.'' (% %>,' D*BB,&D,B,&% *-' >!'' :,!)&')(E,' ?(DF' %>,' :.","%*' %>,' >:(D!(&' -:!,&6' *-' >!'' C*.%>' ;.'% (''%*' %>,' +,G!'>' (' -,G C,(:'' (-%,:' !& %>,' C,(:' S1' %>,')*E,:&B,&% *-' "(.6!.'' 6,-!&!%,"C' A.% (& ,&6' %*' !% >!'' -!&('' (&&,@(%!*&' *-' %>,' F!&)6*B' (&6' D*&E,:'!*& *-'!% !&%*' (' *B(&' A:*E!&D,' ("'*' ,&D*.&%,:,6' (& ,I.(""C' >*A,","'' (&6' ,I.(""C' *?'%!&(%,' :,'!'%(&D,' .% G!%>' %>,' !&%:*6.D%!*&' *-' 6!:,D% (6B!&!'L %:(%!*&' %>,' :,'!'%(&D,' G('' ?:*F,&' >,')*E,:&*:' (% -!:'% *-' ,I.,'%:!(&' (&6' -:*B' :(;(&'' %!B,' *-' ',&(%*:!("' :(&F' &,E,:' >(6' (' ",)!*&H %>,')(::!'*&' ',&% !&%*' %>,' D*.&%:C' %>*.)>' !% G('' &*% '%:*&),:' %>(&' R[[[' B,&' ("*&)' G!%>' (' 'B(""' 'I.(6:*&' '%(%!*&,6' (% ,:!&%>.'' G('' '.--!D!,&%' !&

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:,B*%,' !%' !' -:*B' !%'' '%(:%!&)JA*!&%' %' -*""*G,6' A:,6*L
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!%',"-ʻ ?,%G,,&ʻ %>,ʻ):,(%ʻ '%(&6!&)ʻ D(BA'ʻ %>,ʻ %*G&'ʻ D*&L '%!%.%,6ʻ (-%,:ʻ %>,ʻ %("!(&ʻ B*6,"ʻ (%!(:!(ʻ &*%ʻ -(:ʻ -:*Bʻ !6!&ʻ(&6ʻ ,'D.'ʻ (%ʻ %>,ʻ D*&-".,&D,ʻ *-ʻ %>,ʻ 'F:(ʻ G!%>ʻ %>,ʻ (&.?,K (&6ʻ):(6.(""Cʻ %>,ʻ :,)!*&ʻ (AA:*(D>,6ʻ %>,ʻ ",E,'ʻ *-ʻ %>,ʻ *B(&ʻ D."%.:,ʻ%>,&ʻ '.?'!'%!&)ʻ %>*.)>ʻ *-ʻ!%',"-ʻ *&ʻ !%'ʻ 6,D"!&,ʻ &ʻ %>,ʻ D*&'%:.D%!*&ʻ *-ʻ >!)>G(Cʻ !&ʻ "*G,:ʻ *,'!(ʻ %>,ʻ :.",:'ʻ 6!'A"(C,6ʻ B(&!-*"6ʻ (D%!E!%Cʻ (-%,:ʻ %>,ʻ %!B,ʻ*-ʻ (6:!(&ʻ-:*BʻG>,&D,ʻ%>,ʻ*"6,'ʻ%Bʻ!",'%*&,'ʻ>!%>,:%ʻ -*.&6ʻ%>,:,ʻA:*D,,6

,:B.&J 6.:! -ʻG,ʻ%.:&ʻ-:*Bʻ %>,ʻ'.:E,Cʻ*-ʻ%>,ʻ *B(&ʻ:.",ʻ('ʻ !%ʻ %**Fʻ '>(A,ʻ-:*Bʻ .).'%.'ʻ *&G(:6ʻ !&ʻ %>,ʻ "(&6'ʻ *&ʻ %>,ʻ :!)>%ʻ?(&Fʻ*-ʻ%>,ʻ (&.?,ʻ%*ʻ%>,ʻ:,"(%!*&'ʻ (&6ʻ%>,ʻ!&>(?!%L (&%'ʻ *-ʻ%>,ʻ",-%ʻ G>(%ʻ G,ʻ '>*."6ʻ >(E,ʻ%*ʻ:,B(:Fʻ ('ʻ %*ʻ %>,ʻ B*'%ʻG,'%,:"Cʻ:,)!*&ʻ>('ʻ (":,(6Cʻ!&ʻ%>,ʻ B(!&ʻ?,,&ʻ'(!6ʻ !&ʻ%>,ʻ6,'D:!A%!*&ʻ*-ʻ.AA,:ʻ ,:B(&CH (&6ʻ!&ʻA(:%!D."(:ʻ!%ʻ >('ʻ?,,&ʻ&*%!D,6ʻ#Aʻ/MOgʻ%>(%ʻ%>,ʻ ,:B(&'ʻ&,@%ʻ (6;*!&!&)ʻ (,%!('ʻ%>,ʻ ,:B.&6.:!ʻG,:,ʻ*-ʻ(""ʻ%>,ʻ&,!)>?*.:'ʻ*-ʻ%>,ʻ *B(&'ʻ %>,ʻ B*'%ʻ A,(D,-."ʻ (&6ʻ'*ʻ-(:ʻ('ʻ!'ʻF&*G&ʻ%*ʻ.'ʻ &,E,:ʻ-,"ʻ!&%*ʻD*&-"!D%ʻG!%>ʻ%>,B

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(D!(&'' %>, !:' D(A%!E, ' ?:*%>, :' ' (&6' %**F' >*'%(), '' -:*B'
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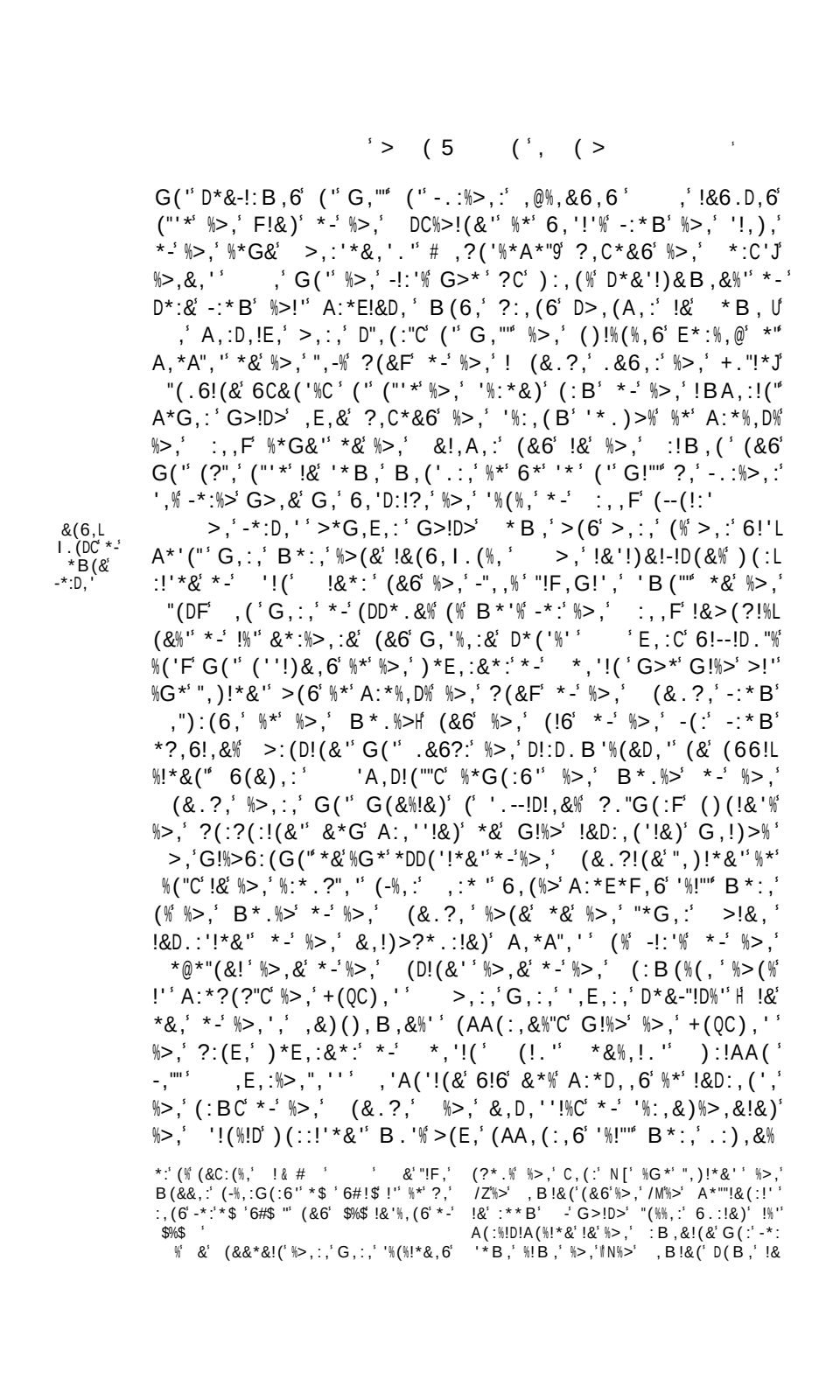

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'2') '!!!'AʻSOR9' -'%>,'%G*'",)!*&''(66,6"(%,:'!'%' 6!&%:!@ʻ(&6ʻR6ʻ 6!.J%:!@ʻ%>,ʻ-!:'%' '!%"" (%%>,ʻ?,)!&&!&)ʻ*-ʻ %>,ʻ:,!)&ʻ*-ʻ :(;(&'"(Cʻ!&ʻ.AA,:ʻ ,:LB(&Cʻ#Aʻ/MOʻ&*%,'!9ʻ(&6ʻD(&ʻ*&"Cʻ >(E,'D*B,'%*ʻ (&&*&!('.&6,:ʻ :(;(&H%>,'',D*&6ʻ'%(%!*&,6ʻ.&6,:ʻ ,'A('!(&ʻ !&ʻ :!%(!&ʻD(&ʻ*&"Cʻ>(E,'D*B,'%*ʻ (&L &*&!('.&6,:ʻ *B!%!(&'#Aʻ/NSʻ&*%,'S9' >,ʻ *,'!(&ʻ (:BCʻ&.B?,:,6ʻ (-%,:%>,ʻ.&!*&ʻG!%>ʻ%>,ʻ ("B(%!(&ʻ.&6,:ʻ ,'A('!(&ʻA:*?(?"Cʻ?.%ʻ-*.:ʻ",)!*&''D*&',I.,&%"Cʻ (ʻ B(&Cʻ ('ʻ %>,ʻ %G*ʻ(:B!,"%*),%>,:ʻA:,E!*.'"CK %>,'"(%,:.AA,:J *,'!(&ʻS%>ʻ "(E!('ʻ(&6ʻN%>ʻ "(.6!('(&6ʻ%>,'"(%,:"*G,:J *,'!(&ʻ/'% %("!D('(&6ʻM%>ʻ (D,6*&!D('>,ʻA*'!%!*&" '>!-%,6ʻ?Cʻ%>,ʻB(:D>!&)ʻ%*ʻ(&6ʻ-:*ʻ*-ʻ%>,ʻC,(:ʻ*-ʻ%>,ʻ-*.:ʻ,BLA,:*:"# (:I.(:6%ʻ&!! =$ @'!!'SZM9'G>!D>ʻ%,BA*:(:!"Cʻ?:*.)>%ʻ%>,',ʻ",L)!*&'%*ʻ *,'!('&,,6ʻ&*%6,D,!E,ʻ.''>,ʻ'.?',I.,&%!>!:6"*G,:J *,'!(&",)!*&ʻ%>,ʻ ",E,&%>'G(" '%!""ʻ.&6,:(;(&ʻ'%(%!*&,6ʻ!&ʻ.AA,:ʻ ,:B(&C ʻ+*',A>.'ʻ $ ʻ #4ʻ E!!ʻ S'ZPʻ :Y,"*%@*!ʻ $ ʻ .Y((!'ʻ 2'' " ='#!" $C=A#)'(' !* 4* ʻ & F=

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E!D%*:C%>(%%>,C'>*."6',&6>!B%>,&,D,''(:C G*:FL
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%>!'>,D(.',6%* ?,',@,D.%,6 ,:,% **B!-*:%.&,

' >,'-:()B,&%' !*@E!!'N' *:6,:*-',E,&%'%*('%!B,'?,-*:,'%>,'
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'.'A!D!*.'' !&%,:D*.:','G('' B(!&%(!&,6'G!%>' %>,' B*:,' :,L B*%,' &(%!E,'' '%!"'' -:,,' :(;(&' D*."6' &*%' ?.%' ?,' D*&L E!&D,6' %>(%' >!'' G*:F' G(' ' ?.%' >("-' 6*&,'H (&6'H:(A!6' !&' :,'*".%!*&' (' >,' G(' ' >,' G!%>*.%' ,&%,:!&)' .A*&' -.:%>,:' &,)*%!(%!*&' ' 6,D"(:,6' G(:' *&D,' B*:,' ()(!&'% %>,' F!&)' %>:,,' C,(:'' (-%,:' %>,' D*&D".'!*&' *-' A,(D,'#/[M9' "(6"C' G*."6' %>,' "(%%,:' >(E,' (E*!6,6' !%H ?.% %>,' 6,B(&6' %>(% >,' '>*."6')!E,' >!B','-' (' D(A%!E,' 'A*F,'%**' D",(:"C' *L %>!&)' G(''",-% ?.% (' '%:.))",' *-' 6,'A(!:' (&6' (""' G,:,'&*% :,(6C' -*:' %>!'H ('):,(% A(:% *-' %>,' (D!(&'' '.?B!%%,6' G!%>*.% :,'!'%(&D,' >,' (AA,('' %*' %>,' &,!)>?*.:!&)' A,*A","' %*' ,&%,:' ;*!&%"C' !&%*' B,('.:,'' -*:' G(:6!&)' *--' %>,'6(&),:' %>(% %>:,(%,&,6' ,E,&' %>,!:' -:,,6*B' (&6' %>,!:' &(%!*&(" ,@!'%,&D,' '*.&6,6' G!%>*.% ,--,D%H ,D,?(".'' (&6' %>,' (D!(&'' %>(% :,B(!&,6'-(!%>-.'' %*' >!B' '%**6'("*&,' !&' %>!'' G(:' >,' (%%,BA%'' %*' B(F,' (G(C' G!%>' %>,' !BA,:!(''),&,:('' ?C' B,(&'' *-' 6,',:%,:'' *:' %*' A.:D>(',' %*",:(?",' %,:B'' ?C' %>,' :,",(',' *-' (' >!)>' *--!D,:' %(F,&' A:!'*&,:' "!F,G!',' ?:*F,' 6*G&' >,' ,BA,:*:' B(:D>,6' *&D,' B*:,' (' E!D%*:' !&%*' %>,' ,&,BC'' D(A!%("' (&6' ,D,L ?(".''G>*' .A' %*' %>,'"('%' B*B,&%'>(6' '%:.))",6' G!%>'-(%,' A.%' >!B','-' %*' 6,(%>' G>,&' (""' G('' "*'%' #/[N9' >!'' %!B,' :(;(&' !>(6,' (&' ,&6H %>,' G(:' D*&D,:&,6' &*' "*&),:' %>,' -:,,6*B' *-'%>,' A,*A"," ?.%' !%'' E,:C' ,@!'%,&D,' >,' &(%!E,' A*A."(%!*&' G,:,'6:!E,&'*.%' -:*B' %>,' ?,'%' A(:%' *-'%>,'"(&6' (&6' %>,',' 6!'%:!D%'' G,:,' :,*DD.A!,6' G!%>' (' &*&J&(%!*&("' A*A."(%!*&' ?:*.)>%' !&' -:*B' %>,' B*.&%(!&'' *-' ("B(%!(' *:' %>,' B!&,'' (&6' *%>,:G!',' A:,A*&6,:(&%"C' (' !%' G*."6' (AA,(:' -:*B' '!(' !&*:' &' ',E,:(" :,)!*&'' &*' 6*.?%' %>,' *"6' A*A."(%!*&' C,%' :,B(!&,6' (&6' ,E,&' %>,' "(&).(),' *-' %>,' D*.&%:C' B(!&%(!&,6' !%''):*.&6 ' >,',' (D!(&'' (' G,"" (' %>,' ',D%!*&'' 6G,""!&)'?,C*&6' %>,'?*.&6'' '%!"")(E,'%:*.?",'%*' %>,' *B(&'K '.?',I.,&%"C'-*:',@(BA",' .&6,:' *BB*6.'' (&6' (@!B!(&.'H ?.% %>,C' '%**6' !'*"(%,6' (&6' 6G!&6",6' (G(C' >,' 6(&),:' G!%>' G>!D>' %>,' E!)*:*.'' >:(D!(&' :(D,' >(6' ',E,:("' %!B,'' %>:,(%,&,6

' ::!(&' !+&'SS'B,&%!*&''(B*&)' ?(%%",JD:!,'' :' ,Y&2D*!9' GB=' -' ,Y3' %>,'D>(&),''G>!D>' (6:!(&'!&%:*6.D,6' &') $ @' ,:%2D*'' 4B':*!' :(%'' !&%*' %>,'D(E(":C' %>(% >,' (""*G,6' %*' + (B--*!4'' ' (' #'/;! M!='' %>,' ',E,:(" 6!E!'!*&'' %>,!:' &(%!*&("

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G!%>' ?:*(6' *.%,:' -*'',' (&6' B(&C' B!",'K-:*B' ,*G(' *&' %>,' :.%>' %*'
:,B(!&'' *-'-*:%'' '%:,%D>'!&' %G*'("B*'%' %>,' &!,'%,:' ?,"*G' ,&6,:C' # ,%,:J'
A(:(",,"'"!&,'' A(:%"CJK %*' %>,'",&)%>' *-' B(&&' $ %!*-' &&-$ #"%$"' /OMN'
&!&,%CJ-*.:' B!",'K-:aB' %>,'",-%'?(&F' A' /RO9' B(C'A,:>(A'' ?,'('"'*' *B(&'H
*-' %>,' :.%>' ?C' G(C' *-' (?(F' (&6' ?.%' %>,:,' >('' &*%' ?,,&' (' C,%' (&C'
(%(:?.&(:' %*' &!,'%,:'J !B(&' ?,L ,@(D%' ',%%",B,&%'*-'%>!'' A*!&%

'.?'!'%!&)' G,:,' G!%>("' 6!E!6,6' %>,' -!:'%' .&6,:' *B!%!(&' %>,' ',D*&6' .&6,:' :(;(&' (&6' ('' %>,' (D!(&' G(' '.A,:J' (66,6' %>,' G>*"," &.B?,:' *-' %>,' D*BB(&6,:'>!A'' *&' %>,' "*G,:' (&.?,' G(' -!@,6' (%' -!E,' %' %>,' *.%',%' !&6,,6' %>,C' ',,B' %*'>(E,'D.%'*--'%>,' D*:&,:' G>!D>' %>!'' '%:,(B' -*:B'' ?,"*G' .:*'%*:.B' # !"!'%:!(9K %>,' B*6,:&' *?:.6'D>(K' (&6' -:*B' %>,' A"(D,' &*G' D("",6' (''*G(' G>,:,' %>,' :!E,:' (AA:*(D>,'' G!%>!&' %>!:%C' B!","' *-' %>,' ',(' !&' *:6,:' %>,&' %*' ?,&6' ("B*'%' (%' (' :!)>%' (&)","' %*' %>,' &*:%>' %*' >(E,' '.?'%!%.%,6' -*:' %>,' :!E,:J"!&,' (' -*:%!-!,6' :*(6' (-%,:' %>,' B(&&,:' *-' %>,' :!%!'>' #A' /ON9' G>!D>' :,(D>,6' %>,' D*('%' (%' *B!' ' >!'' D*:&,:' >*G,E,:' G('' (%" ,('%' -:*B' %>6' %!B,' *-' (6:!(&' ,B?:(D,6' G!%>!&' %>,' *B(&' -:*&%!,:J' -*:%!-!D(%!*&' H' -*:' -:*B' %>(%' %!B,' G,' -!&6' "*G,:' *,'!(' G>!D>' ?,-*:,' :(;(&' >(6' A:*?(?"C' A*'',',6' &*' "(:),:' '%(&6!&)')(::!'*&'' (%' ("' -.:&!'>,6' G!%>' %>,' %>:,',",)!*&(:C' D(BA'' *-' *E(,' #&,(:' E!'D>%*E(9' .:*'%*:.B' # !"!'%:!(9' (&6' :*,'B!'' #)"!%Q(' &,(:' ("(%Q9' *-' G>!D>' %>,' "('%' "!,'' !&' -:*&%' *-' %>(%' E,:C' (&)","' *-' %>,' (&.?,')(!&'%' %>,' +(QC),'' %>,' A*'!%!*&' G('' '%:,&)%>,&,6' ?C' (66!&)' %*' %>,

3 DD*:6!&)' %*' E*&' !&DF,'' ,'%!B(%,' A "!& $ +-&$' $' 4$' ;$ -!"4#"%$"' 4$' $ $-+-!&' 4B#"4$' "' $ "' !&' %>,' C,(:'' /0ZOJS[' A' /ON' - H' D*BA' !&' E*&' *"%F,'' $ $' $',# &!"4$' "' 4$' # B$' %>,'",%%,:' *-' R6' *E' /0ZN9' ('aG,"" (' (DD*:6!&)' %*' %>,' 6,"!&,(L %!*&" (&6' A"(&'' *-' :' ' D>.D>>(:6%' D*BB.&!D(%,6' %*' B,' %>:,,' ?(::!,:'' G,:,' >,:,' D*&'%:.D%,6' >,' '*.%>J' B*'% (&6' A:*?(?"C' *"6,'%' !'' (' '!BA",' ,(:%>,&' G("" G!%>' #'!&)."(:"C9' (' -*'',' !&' -:*&%' *-' !%' %*G(:6'' %>,' '*.%>H G>,%>,:' *-' *B(&' *:!)!&' B(C' ?,' 6*.?%-."' >,' %G*' *%>,:' "!&,'' (:,' (&' ,(:%>,&' G("" ,E,&' &*G' (%' B(&C' A"(D,'' (''>!)>' (''%>:,,' BF:,'' (&6' ("*G,:' G("" *&D,' "!&,6' G!%>' '%*&,'' G>!D>' *-%,&' :.&' D"*',' ?,'!6,' ,(D>' *%>,:' (&6' ,"',G>,:,' ()(!&' (:,' B!","(A(:%' ,' B!)>%' >*"6' %>,B' (''%>,' %G*' "!&,'' (' -*:%!-!,6' :*(6'%>*.)>' !&' %>,' ,('%,:&' >("-' %>,' ,(:%>,&' G("" !&' %>,' B*:,'' '*.%>,:&' >("-' %>,' '%*&,JG("" !'' %>,' B*:,

&*:%>,:"C' (&6' %>,C' D:*''' !&' %>,' B!66",' %' *&,' 'A*%' %>,' ,(:%>,&' G("" #>,:,' B*:,'' '*.%>,:"C9' -*:B'' %>,' :,(:' *-' (' -*:%' D*&'%:.D%,6' ?,>!&6' %>,' '%*&,' JG("" >,' ,(:%>,&' G("" !'' D*E,:,6' *&' %>,' &*:%>' '!6,' ?C' (' 6,,A' *&' %>,' '*.%>' '!6,' ?C' (' '>("'*G'-*'',H' ,(D>' -*'',' !'' D"*',6' *-' ?C' (' ?(&F' -*'',' "!,'' (" ' *' !&' -:*&%' *-' %>,' '%*&,L G("" %*' %>,' &*:%>' ,>!&6' %>,' ,(:%>,&' G("" (&6' B*'%"C' :,'%!&)' *&' !%' (:,' -*.&6' -*:%'' 6!'%(&%' -:*B' ,(D>' *%>,:' ',E,&'>.&6:,6' (&6' -!-%C' B!%:,'' H *%>,:'' (%' !::,).":6!'%(&D,'' *-' %>,' "!F,' F!&6' ?,>!&6' %>,' '%*&,JG("" "" %>,' "!&,'' F,,A' ?,>!&6' %>,' (:('.J"(F,'' ('' %>,' &(%.:(" ?('!'' *-' 6,-,&D,H -:*B' %>,' A*!&% G>,:,' %>!'' D,(','' %>,C' (:,' D(::!,6' (''-(:' ('' %>,' ',('G!%>' '"!)>%' :,)(:6' %*' %>,' D>(:(D%,:' *-'%>,'):*.&6' >,' %*G&' *B!'' "!,'' *.%'!6,' *-' %>,' G("" (&6' %*' %>,' &*:%>' *-' !%H ?.%' !%'' -*:%:,''JG("'' (:,' A.%' !&' D*&&,D%!*&' G!%>' %>,' ?(::!6--*:%!-!D(%!*&' ?C' ('A,D!(" G(""

.AA,: *,'!(&D(BA (% !&)!6.&.B (&6 !B!&(6.B %>, "*G,: (&&*&!(& (% %>, D*&-".,&D, *-% %>, >,!' G!%> %>, (&.?,&,(: D.B!&D.B (D!(!%',"-G(%>,&?.% G,(F"C)(::!'*&,6 >, D(A!%(" &*G (D*"*&C *- :(;(& (:B!Q,),%.'("(C &*% -(: -:*B %>, D>!,- D:*''!&) *E,: %>, (&.?, !& .AA,: *,'!(H >,:, (&6 *& %>, B!66", (:!'.' (' G,"" (?,C*&6 !% !& %>, 6!'%:!D% *-% %>,)*"6 B!&,' %>, *B(& D>!,-"C ',%%",6H %>, *&, ",)!*& ',:E!&) ( )(::!'*& '!&D, :(;(& %!B, !& (D!(*?%(!&,6 !%' >,(6I.(:%,:' (% ",('% '**& (-%,:G(:6' !& %>!' :,)!*& (% A.".B # (:"'?.:)9 (:%>,: %* %>, &*:%> *%(!''(# >*:6(9 (&6 (A*D(# "(.',&?.:)9 G,:, A:*?(?"C ("'* (% *&D, %(F,& A*'', ''!*& *-? C %>, *B(&' ?.% !% G(' *&"C):(6.(""C %>(% %>,):,(% (&&*&*J (D!(& B!"!%(:C D,&%:,' A.'>,6 -(:%>,: %*G(:6' %>,' &*:%> >, %:(&' ,:J ,&D, *-% %>, "*G,: (&&*&!(& ",)!*& -:*B D.B!&D.B %* I.!&D.B %>, B*6,:& 6((&6 %>, *DD.A(%!*& *-% %>!' D*BB(&6!&) B!"!%(:C A*'!%!*& -("" >*%"(%,: %>(& (6:!(& (&6 A:*?(?"C .&6,:>!B H A:*?(?"C (% %>, '(B, %!B, *&, *-% %>, .AA,: (&&*&!(& ",)!*& D(B, %* :!),;*#*AA*'!%, %* *B*:&9 &6,: *BB*6. ("" ',%%",B,&% G(' A:*>!?!%,6 ("*&) %>, &*:%>,:& -:*&%!,: *- (D!(-*: (?:,(6%> *- &,(:"C -!E, B!",' G>!D> B.'% '%(&6 D*&L &,D%,6 G!%> %>, -:*&%!,: :,)."(%!*&' %* ?, ' .?', I.,&%"C B,&%!*&,6 (-%,: %>, (:D*B(&!(& G(: % %>(% %!B, ("'* %>, -*:%!-!,6 "!&, B(C >(E, *:!)!&(%,6 G>!D> ?(::,6 %>!' -:*&%!,: '!B!"(:"C %* %>, .AA,: ,:B(&!D &6,: ,E,:.' *&, *-% %>, ",)!*& A:,E!*.'"C !& "*G,: *,'!(G(' ?:*.)>% %* *%(!''(# >*:6(9 *& %>, (D!(& *:%> -:*&%!,:

(D!(' (& (6E(&D,6 A*'!%!*&

.% ,E,& (-%,: %>,',%:(&'-,:,&D,' (D!(J:,B(!&,6 (& (6E(&D,6 A*'!%!*& *& %>,',-% ?(&F D*E,:,6 ?C B*.&%(!&' (&6 %:,&D>,' G!%> :,-,:,&D,% *' G>!D> !% B!)>% G,"" ?, 6*.?%-.' G>,%>,: !% 6!6 B*:,% *' A:*B*%, *:% *' !BA,6, %>,),&,:(' 6,-,&'!E, (%%!%.6, *-% %>, *B(&' (6:!(& !& -(D% >(6 %>*.)>% *-)!E!&) .A %>!' %,::!%*:C (&6 '* :,)(:6,6 !%' !&D*:A*:(%!*& (' (B!'%(F,H (-%,: %>, '%,A >(6 *&D, ?,,& %(F,& %>,:, D,:%(!&"C A:,A*&6,:(%,6 %>, D*&'!6,:(%!*& !- &*% *- %>, ".D:(%!E,)*"6 B!&,' *- %>, D*.&%:C ((% (&C :(%, *- %>, *B(& D!E!"!'(%!*& :(A!6"C

6,E,"*A!&)' !%',"-' !&' %>,' :,)!*&' *-' %>,' (:!'.'' .%' >,' D(.',6' (%",('%' %>,' '.A,:'%:.D%.:,' *-' %>,' '%*&,' ?:!6),' *-' %>,' (&.?,' %*' ?,' :,B*E,6' (' >!'' (AA:,>,&'!*&' *-' !%'' ?,!&)' .',6' ?C' %>,' ,&,BC' *.%G,!)>,6' >!'' D*&'!6,:(%!*&' -*:' %>,' (D!(&')(::!'*&' >,' "(%,:' A,:!*6' :,",(',6' !%',"-' -:*B' %>!'' (&@!,%CH ?.%' %>,' ,DD,&%:!D' A*'!%!*&' *-' (D!(' !&' :,"(%!*&' %*' %>,' :,'%' *-' %>5' -:*&%!,:J6,-,&D,' :,B(!&,6

>,' '!@%C' C,(:'' (-%,:' %>,' (D!(&' G(:'' *-' :(;(&' G,:,' -*:' %>,' (&.?,' "(&6'' (' %!B,' *-' A,(D,' (&6' *-' A,(D,-.' 6,E,"*AB,&%' *' 6*I?%' %>,:,' G('' &,E,:' ,&%!:,' I.!,%' A(:%!D."(:"C' (%' %>,' B*.%>'' *-' %>,' (&.?,' (I6' ,E,&' %>,' >(Q(:6*.'' ,@A,6!,&%' *-' A.:D>('!&)' %>,' ',D.:!%C' *-' %>,' -:*&%!,:' -:*B' %>,' (6;*!&!&)' :,'%'','' &,!)>?*.:'' ;.'%' ('' G('' 6*&,' G!%' ,D,?(".'' ?C' %>,' ?,'%*G('' *-' C,(:"C'):(%.!%!,'' G('' -.:%>,:' ,BA"*C,6' C,%' %>,' :,B(!&'' *-' (&%!I.!%C' '>*G' (%' %>!'' E,:C' %!B,' ,E,:CG>,:,' %>,' -"*.:!'>L !&)' *-' .:?(&"!-,' (&6' &*%' (' -,G' D*BB.&!%!,'' A(:%!D."(:"C' *-' (&&*&!(' &(B,' ('' %>,!:' -*.&6,:' (6:!(&' *:' !.'' .%' .A*&' %>!'' '%!""*G,6' (' '%*:B' '.D>' ('' %>,' ,BA!:,' >(6' &*%' C,%' '.'%(!&,6' (&6' G>!D>' ("%>*.)>' A:*A,:"C' ?.%' (' -:*&%!,:JG(:' ?C' !%'' ,@%,&'!*&' *E,:' (' ',:!,'' *-' A:*E!&D,'' (&6' ?C' !%'' 6.:(%!*&' -*:' %>!:%,,&' C,(:'' '>**F' %>,' ,BA!:,' !%',"-

>,' G(:' &(B,6' (-%,:' %>,' (:D*B(&!' G('' &*%' F!&6",6' ?C' (&C' '!&)",' A,:'*&(),' *-' %>,' %CA,' *-' (&&!?(' *:' ,D,?(".'' '' "!%%",' 6!6' ()):,''!*&'' *&' %>,' A(:%' *-' %>,' *B(&'' A:*E*F,' %>!'' G(:< %>,' ,BA,:*:' !.'' !&;.:,6' &*' &,!)>?*.:' ,!%>,:' A*G,:-.' *:' >.B?",' (&6' ',%' & A,(D,' ("B*'%' B*:,' %>(&' !%'' ;.'%' E(".,' >,' :,("B' *-' (:*J' ?*6..'' (&6' *-' (&&!.'' >(6' %>,:,(-%,:' A,:>(A'' !&' D*&',I.,&D,' *-' %>,' A(:%!%!*&' .&6,:' (&)!*' (&6' !6*' #A' R/19' ?,D*B,' 6!E!6,6' !&%*' %>,' F!&)6*B' *-' %>,' (:L D*B(&!' !&' G>(%' !'' &*G' *>,B!(' (&6' %>(%' *-' %>,'].(6!' !&' *:(E!(' (&6' .AA,:' .&)(:C' *&-"!D%'' G!%>' %>,' *B(&'' 6*' &*%' (AA,(:' %*' >(E,' *DD.::,6' >,:,H %>,' E(''("J' :,"(%!*&' *-' %>,' A:!&D,'' *-' %>,']!+(6!' G('' ,E,&' -*:B("'C' :,D*)&!',6' .&6,:' %>,' :,!)&' *-' !.'' ?C' %>,' D*&-!:B(%!*&

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RZ[ ) * + " , * %

('F,6 -*: >!-%!&)'' *-A,*A",' G>!D>' "(C ?,C*&6 %>, *B(& >*:!Q*& G,:, %>,' A:*@!B(%,' D(.',' *- %>,'):,(% G(: **&' (-%,:' %>,' 6,(%>' *- !.'' #% !1!9 B('','' *- ,:B(&' ,'A,D!(""C (&)*?(:6!' -:*B' %>,' "?, ?.% ("'* (:D*B(&! (&6 *%>,:' ?*6!,'' *- B,& (AA,(:,6 !& (&J &*&!(' (AA(:,&%"C %*')(!& &,G (?*6,'' *& %>,' :!)>% ?(&F :,'',6 >(:6 ?C %>,' *B(& %:**A'' G>*' G,:, 6,'A(%D>,6 ()(!&'% %>,B %>,C ',&% %>,' A:!&D,' *- %>,' (:D*B(&! ("*B(:!.' (&6 G!%>' >!B (' :,A:,',&%(%!E,' *- ,(D>' *- %>,' %,& %:!?,'' %(F!&) A(:% %*' :,&,G %>,!:' :,I.,'% -*:' (''!)&(%!*& *- "(&6 .% %>,')*E,:&*:' (?*6,' ?C >!'' 6,D!'!*& (&6 D*BA,"",6 %>,B %*')*' ?(DF *E,:%>,' (&.?,

%''?,)!&L &!)

>!'' G(' %>,' ?,)!&&!&)' *- %>,'):,(% (&.?!(& G(: >,')*E,:&*:' *- .AA,:' ,:B(&C (!&'' .-!6!.'' !D%*:J !&.'' %>,' -(%>,:J!&J"(G *- :*&%*' F&*G& !&"!%,:(%.:, >(6 (":,(6C (?*.% %>,' C,(:' /1R %*' :,A,'" (& (''(."% *- %>,' >(%%!' G>!D>' "!F,G!',' B(C >(E,' ?,,& *DD('!*&,6 ?C %:!?,'' -:*B %>,' "?,' A:,''!&)' *& %>,!:' :,(:' (6 ,I.(""C ,&,:),%!D '%,A'' ?,,& %(F,&):,(%,:' B!'D>!,- B!)>% >(E,' ?,,& (E,:%,6 .% ;.'% %>,& %>,' :B,&!(& G(:' >(6 ?,).& !&%*' G>!D>' %>,' (:%>!(&'' '**& ,&%,:,6 H %>*.)>' %>,' %:**A'' G,:,' &*% ,@(D%"C ',&% (G(C -:*B %>,' %>:,(%,&,6 -:*&%!,:' %*' %>,' ,('% -*:' G>!D>' %>,:,' !'' (% '',('% &*' ,E!6,&D, ' %>,:,' G('' (% (&C :(%,' (' G(&% *- B,& %*' %(F,' .A' %>,' ',D*&6 G(:' (% *&D,' G!%>' ,&,:)C >!'' %,BA*:!'!&)' ',E,:,"C (E,&),6 !%','- +.'% G>,& A,*A",' G,:,' %:!.BA>L !&)' !& *B,' *E,:' %>,' F!&)'' *- %>,' ,('% *& %>,' (&.?,' %>,' >(%%!' %>,' (:D*B(&!' %>,'].(6!' %>,' +(QC),'' ?.:'%

' ' 6 ' /SP ! ' ' ' ' ! ' ' ' + 7 ' ' " ' + ' !*' !& ,%:.'' (%:!D!.'' + ' 1' '(C'' H 88 2 $ ' 9 ' #*%>,:G!', .&F&*G&9 : 0) ;" $ ' <') ' = 9' #A,:>(A'' (":,(6C %>,& + ' #!& G>!D>' D(',' %>,').(:6 G*."6 ?,' B(:D>,6 *.% *& (DD*.&% *-%>!'' *DD.::,&D,9' - ' YO!A 4' V= ! ' 4 ' 4GMK 8 4=4 b '' >2 # ' ? = ' 2@ >AB C 82 ' ' 2 ' D 7 @ " ' "8 ">,' 9 ' E ' 0 ' 2 2 ' '2 2 ') !*4' &C *' 4!! =' 5! = !*' 4& = !'! =!' (Y*;.6A%6;2:,' 2- *!! C4!'9 !* G4*@*' ! ' * = ' !' ! ' b* ' &"C$ 4)$* &' *!!' ! ' J* Z ' *' $* 7*' ' !"!*]! $ ' c& # 5 4 G$* ' & ! $ @GA* *%;' >(% %>!'' !&D!6,&% -(""'' ?,-*:,' %>,' *.%?:,(F -*' %>,' G(:' !'' '>*G&' ?C !%'' A*'!%!*&H ' N -*' (%:!D!.'' !'' (&' ,@D,:A% -:*B' !*' @@!' ' R ± >,' *,'!(&' (:BC)(E,' (G(C '*"6!,:'' %*' %>,' :B,&!(&' G(:' # !:'D>J -,"6' +-' $* %' && B' E!' S/9 H ?.% >,:,' %>,' -:*&%!,:' G('' &*% ,&L 6(&),:,6

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%>,' '(B,' B*B,&%H !&' %>,' (D!(&' B!&,J6!'%:!D%' G,' D(&'
'%!'"" -*""*G' %>,' %:(D,'' *-' %>!'' !:::.A%!*&' >(%' 6,E('%(%!*&''
%>,C' %>,&' G:*.)>%' !&' %>*',' :,)!*&'' G>!D>' -*:' "*&)' >(6'
',,&' &*' ,&,BC' !'' '>*G&' ?C' %>,' -(D%' %>(%' ',E,:(" C,(:''
(-%,:G(:6'' %>,'].(6')(E,' ?(DF' -!:'%' /Z [[[' %>,&' M[[[[' '
(&6' %>,' +(QC),'' ,E,&' /[[[[[' *B(&' D(A%!E,'' *:'
6!6' %>,' B(%%,:' ,&6' G!%>' %>,' !&;.:C' 6*&,' %*' %>,' A:*E!&D,'
>,:,' >(AA,&,6' G>(%' >(6' &*%' *DD.::,6' -*:' %>:,' >.&6:,6' !&E('!*&' *-'
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,-,(%'' *-' !&6!E!6.(" *B(&' 6!E!'!*&'' B.'%' >(E,' %(F,&'
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D*BB(&6(&%'' *-' %>,').(:6' !D%*:!&.'' -,"" ?,-*:,' %>,'
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G,'%' G>!D>' 'G,A%' B,&' (G(C' B*:,' D*&%F!.*.'"C' %>(&' %>,'
G(:' (&6' !&' B*:,' -,(:-." B,('.:,' >,&' %>,' %:**A'' G,:,'
D*&D,&%:(%,6' ('' G(' &,D,''(:C' %>,' E!D%!B'' *-' %>,' A,'%!L
",&D,' G,:,' ("" %>,' B*:,' &.B,:*.'' '' 6,(:%>' ("G(C''
(DD*BA(&!,'' A,'%!",&D,''*' *&' %>!'' *DD('!*&' %>,:,' (AA,(:,6'
G!%>' !%' -(!".:,' *-' D:*A'' (&6' -(B!&,' (&6' ',E,:,'-!&(&D!("
6!'%:,''H %>,' %(@,'' 6!6' &*%' D*B,' !&' (&6' !&' %>,' D*.:',
-' %>,' G(:%>,' ,BA,::' '(G' >!B',"-' .&6,:' %>,' &,D,''!%C'
-' ("!,&(%!&)' ?C' A.?"!D' (.D%!&' %>,';,G,"'' *-'>!'' A("(D,
>,:,' G('' "(DF' *-' (' -!%%!&)' ",(6,:' ' B!"!%(:C' (&6' E,B '' (&6'
A*"!%!D("' %('F' '*' ,@%,&'!E,' (&6' '*' D*BA"!D(%,6' D*."6' ('
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(' D*::,D%' (&6' B*6,'%' F&*G",6),' *-' >!'' '>*:%D*B!&)'' *&

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&*%>,:'A,:B(&,&% D*&',I.,&D,'*-'%>!'' G(:'G('' D*&J &,D%,6'G!%>'%>,':,B*E("'''%*'G>!D>'!%)(E,'*DD('!*&'*-'%>,' :(&'6(&.?!(&'' *E,:'!&%*'%>,' *B(&,BA!:,' -'%>,BL ',"E,'' '.D>' D>(&),'' *-' ',%%",B,&% >(6'*DD.::,6'(% (""' %!B,'H %>,' .)(B?:!' %:(&'A"(&%,6'.&6,:' .).'%.'' %*' (."'%>,' (D!(&'',&% %*' >:(D,'G,:,'&*%>!&)'?.% &,G' '.?;,D%'' *:' D*BB.&!%!,'' *-' '.?;,D%'' (66,6'%*' %>*',' -*:L B,:"C',@!'%!&)'(&6'A:*?(?"C'&*% B.D>'6!--,:,&% G,:,'%>,' Z[[[' (:!'%(,'G>*B' (:D.'' (""*G,6'%*' ,@D>(&),' %>,!:' ',%%",B,&%'' G,'%G(:6' *-' *>,B!(' -*:' '.D>' ',%%",B,&%'' G!%>!&%>,',BA!:,'G>!",'%>,'"!F,':,I.,'%G('' :,-.',6'%*'%>,' *%>,:G!',' .&F&*G& '%!&)!'*&'%>,' (D!(&'&*:%>' -:*&%!,: .%'%>,' ,:B(&'',%%",6'?C'>!B'&*% B,:,"C'!&'%>,'"(&6' *-'%>,' (&.?,'?.%'!&' %("C'!%',"-'(% (E,&&('G,:,'&,!%>,:' -:,,'' .?;,D%'' &*:'' '%:!D%"C'&*&J-:,,'A,:'*&''H %>,'','G,:,'%>,' ?,)!&&!&)'' *-'%>,' *B(&E!""(&(),'%>,'D*"*&(%,'%>,'!&L -".,&D,'*-'G>!D>'*&'%>,'()!D.'%.:(" ,D*&*BC'*-'%>,'G>*",' '%(%,'!'' %*' ?,'',% -*:%>'!&' (&*%>,:' D*&&,D%!*&' >(% (E,&&(%,'',%%",B,&%'>*G,E,:'>(6'&*'A,:B(&,&D,H %>,' B,&:*','!&:,E*"% (&6'>(6'%*'?,'D*&E,C,6'(G(C''*'%>(% %>,'&,G'D*"*&(%,':,B(!&,6':,'%:!D%,6'A:!B(:!'C' %*' %>,' A:*E!&D,''A(:%!D."(:'C'%*'%>,'"(&6'' *-'%>,' (&.?, >,')':,(%G(:'*&' %>,'B!66",' (&.?,'G('' &D,'B*:,' >,'(6' -*""*G,6'?C'('!@'C,(:''%!B,'*-'A,(D,'%>,'?","''!&)'' *-' G>!D>'D*."6'&*% ?,'D*BA",%,"C'&,.%:("!',6'?C'%>,'!&%,:&(" B!')*E,:&B,&% %>(%G('' D*&'%(&%"C'!&D:,('!&)'6.:!&)'!%'' D*.:',' *'6*.?%E(:!*.''!'*"(%,6'(DD*.&%'''>*G'%>(%>,' -:*&%!,:' ,'A,D!(""C'%>,' (D!(&'G>!D>'G('' B*'%' ,@A*',6' :,B(!&,6'&*% G!%>*.% %:*.?",H ?.% (?*E,' (""'%>,'' '%,:& B!"!%(:C')*E,:&B,&% *-' ,E,:.''6!6'!%'' 6.%C'>,:,' (&6'(% ",('% (: *B(&!'(&6'].(6!'(AA,(:',E,& .&6,:'>!''!BL B,6!(%,'' '.DD,''*:'' !&' .&D*&6!%!*&('' 6,A,&6,&D,' '*'%>(% %>,'' '*&' *-' ,E,:.'' D*."6'D!%,' (' A:!&D,'*-'%>,']. (6!'?,-*:,' >!B' (&6'"(C'>!''>,(6'(%>!''-,,%' >,'D*&-"!D%'' *DD.::!&)

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%>,' G>*",' B('' *-' A,*A",'' ',% !&' B*E,B,&% ?C' %>,' '%:,(B'
-' B!):(%!&' -:*B' %>,' &*:%>J,('% %*' %>,' "(DF' ,(' %**F'
A(:% !&' !%H (&6' %**F' A(:% ("" %>,' B*:,'',!&)' %>(% %>,',
(%%(DF'' %**F' A"(D,';.'% (' B.D>' ?C' "(&6' *E,:' %>,' "*G,:'
(&.?,' (' ?C' G(%,:-:*B' %>,' &*:%>' D*('%'' *-' %>,' "(DF'
' ,(' !&' (&' !&,@%:!D(?",' D*BA"!D(%!*&' *-' "(&6G(:6' (&6'
B(:!%!B,' A!:(DC' *% .&'.!%(?"C' %>,:,-*:,' %>,' ",(:&,6

%>,&!(&' G>*' -*.)>%' !&' %>!'' G(:' (&6' >('' &(::(%,6' !%' A:,-,:'' %*' %,:B' !%' %>,' DC%>!(&' ('' >,' !&D".6,'' .&6,:' %>!'' &(B,K G>!D>' "!F,' %>,' ,"(')!(&' -*:B'' %>,' 6,'A(!:' *-' %>,' >!'%*:!(&K ("" ,:B(&!D' (&6' &*&J ,:B(&!D' ,&,B!,'' *-' %>,' ,BA!:,' >(%' !'' %*' ?,' %*"6' *-' %>,',' ,@A,6!%!*&'' G!"" >,:,' ?,' ?:*.)>%' %*),%>,:' '*' -(:' (' %>,' D*&-.'!*&' *-' %:(6!L %!*&' G>!D>' !'' *&"C' %**' B.D>' !&' F,,A!&)' G!%>' %>,' D*&-.'!*&' *-' %>,',' -,(:-.'' %!B,'' ("*G'

>,' C,(:' RZ0K (' C,(:' ("'*' *-' D!E!" G(:' G>,&' %>,:,' *%>!D' G,:,' -*.:' ,BA,:*:'K !'' 6,'!)&(%,6' (' %>(%' &' G>!D>' %>,' G(:' ()(!&'% %>*',' >,:,' -!:'% &(B,6' *%>'' ?,)(& '' %>,' D*!&'' *-' C:(' (&6' "?!(' D,(',' G!%>' ",@(&6,:' #-' RZM9' %>,',' *B(&' A*'',''!*&'' '!%.(%,6' ?,C*&6' %>,' ?*.&6(:C' *-' %>,' ,BA!:,'>(6' 6*.?%","'' ?,D*B,'' *B,' C,(:'' ,(:"!,:' (' A:,C' %*' %>,' &,G' ,&,BC' &' %>(%' C,(:' %>,C' -!:'% D:*'',6' %>,' (&.?,' (&6' %>,' B*'%' &*:%>,:"C' *-' %>,' *,'!(&' D*('% %*G&'' '%:*'' G('' %>,' -!:'% E!D%!B' *:6!(&.'' G>*' ,B,:),6' *.% *-' %>,' D*&-.'!*&'' *-' %>!'' %!B,' ('' :.",:' !'' 6,'!)&(%,6' (' D*&I.,:*:' *-' %>,' *%>'' H !%' !'' B*:,' D,:%(!&' %>(%' %>,' *B(&')*E,:&B,&% (%' (&C' :(%,' .&6,:' >!B' !-' &*%' (":,(6C' ,(:"!,:' ():,,6' %*' ?.C' *--' %>,' *%>!D' !&D.:'!*&' =' '' G('' &(%.:("' %>,' (:A!' 6,B(&6,6' %>,' '(B,' ('' %>,' ,BA,:*:' >(6'):(&%,6' %*' %>,' !&-,:!*:' *%>'' H G>,&' %>,' 6,B(&6' G('' &*%'):(&%,6' %>,C' !&E(6,6' %>,' *B(&' %,::!%*:C' !&' %>,'

/ >,' ("",),6' -!:'% B,&%!*&' *-' %>,' *%>'' !&' %>,' ?!*):(A>C' *-' (:(D("'(' D' /[' :,'%'' *&' (' B!'.&6,:'%(&6!&)' -' :,("'C' (' ',&(%*:' ("'*G,6' >!B','-' %>,' B("!D!*.'' ;,'%' *-' (''!)&!&)'%*' %>,' B.:6,:,:' *-' ,%(' %>,' &(B,' ,%!D.'' ?,D(.',' >,' *&' >!'' B(:D>' -:*B' %>,' (&.?,' %*' %>,' ,('% >(6' D*&I.,:,6' '*B,' ,%!D' >*:6,'' A&# # &#! '* $.' F' >,' B,(&% (D!(&'' &*% %>,' *%>'' 'D(:D,"C' (% %>(% %!B,'6G,""!&)' %>,:,' (&6' >(:6"C' F&*G&' %*' %>,' *B(&' A.?"!D' G>*','!6,&%!-!D(%!*&' G!%>' %>,' ,%(,' G(" D,:%(&*"C' *&"C' ("(%,:' !&E,&%!*& KJ ,' B(C' (66' %>(% %>,' '%(%,B,& %>(% %>,' ,BA,:*:' (@!B!&.'' #RZMJRZ0' G(" %>,' '*&' *-' (' *%>' ',%",6' !&' %>,' &,!)>?*.:!&)' >:(D,' D(::!,'' .'' '%!"" -.:%>,:'?(DF'H' C,%' &*% B.D>'G,!)>%!'' %*'?,'(%%(D>,6' %*' !%

3' ,%:.'' (%:!D!.'' ' O' >,'(6L B!&!'%:(%!*&' *-' %>,',"),(%,' *-' "*G,:' *,'!(' >,:,' B,&%!*&,6' ."'!.'' ,&*A>!".'' !'' -!@,6' ?C' D*!&'' D,:L %(!&"C' %*' %>,' %!B,' *-' *:6!(&' (&6' G!%>' A:*?(?!"!%C' %*' RZ0JRS[' # *:J')>,'!' * '!!' RRN9' '' %>,' ?,)!&L &!&)' *-' %>,' *%>!D' G(:' (&6' %>,' 6,'%:.D%!*&' *-' '%:*'' (:,' -!@,6' ?C' ,@!AA.'' A=&!' !G' $&' ! ' /1' (%' RZ0' !%' !'' &(%.:("' %*' ?:!&)' !&%*' D*&&,D%!*&' G!%>' %>,',' ,E,&%'' %>,' .&L 6,:%(F!&)' *-' %:!?.%,'H (%' (&C':(%,' !%' G(" %>,&' :,&,G,6' >,' E(!&'!,),'' *-' (:D!(&*A*"!'' (&6' >!"!AA*A*"!'' ?C' %>,' *%>'' # ,@!AA.'' ' /0' /0' B(C'>(E,' -*""*G,6' *&'%>,' D(A%.:,' *-' '%:*'' +*:6(&,'' $&' RJ' OR' A.%'' %>,' -*:B,:' .&6,:' >!"!AA.'' ?.%!'' !&' D>:*&*"*)!D("' I.,'!%!*&'' &*%' (' E("!6' G!%&,''

C,(:'RSM' >,',BA,:*:' >!"!AA.'K *:6!(&.'' G('' (%'%>(%' %!B,' (":,(6C'6,(6JAJ:,A."', ' %>,B ' (&6' ,&,:),%!D' (D%!*&' G!%>' %>,' D*B?!&,6' '%:,&)%>' *-' %>,'):,(%' ,BA!:,' G*."6' A:*?(?"C' >,:,' >(E,' D>,DF,6' %>,' ?(:?(:!(&'

,D!.'' .%' !&'%>,',' C,(:'' %>,' B.:6,:,:'*-'(&',BA,:*:':,(D>,6' %>,',%>:*&,' ('' '.:,"C' (' >,'-*.&6' !&'%.:&' >!'' *G&' B.:6,:,:' (&6' '.DD,''*:'H !%' G('';.'%' !&'%>,' !BA,:!"",6':,)!*&'' *-'%>,' (&.?,' %>(%'%>,' (:BC' A:*D"(!B,6' ()(!&'%' %>,' ,BA,:*:' >!"!AA.'' -!:'%' (:!&.'' (D(%!(&.'' (&6' (-%,:' >,' G('' ',%' ('!6,' :(!(&.'' ,D!.'' G>!D>' "(%%,:'!&'-(D%'E(&I.!'>,6' >!'' (&%()*&!'%'!&' %("C' (&6' G('' (DF&*G",6),6' ('' :.",:' ,' G('' (&'(?","(&6'?:(E,'B(&'&*%'.&G*:%>C'*-'%>,'%G*'&(B,'' G>!D>' >,'?*:,' (&6',&%,:,6''*'**&'(!'' >,'D*."6':,''*".%,"C' !&%*' %>,' D*&-"!D%'' *&' %>,' (&.?,'H ?.%' G>(%'%>,'D!E!'' G(:' G(),6'!&' %>,' B,(&G>!","'>(6'6,'%:*C,6'D*."6'&*''"*&),:'?,' :,%:!,E,6' >!",'%>,' *B(&''G,:,'-!)>%!&)'G!%>'*&,'(&*%>,:' %>,' *%>'' (&6'%>,' (:A!'>(6'.&!%,6' (&6'>(6'.&6,:'%>,' *%>!D' A:!&D,' &!E(' !&E(6,6' *,'!(' 6,&.6,6' *-'%:**A'' >,')*E,:&*:'*-'%>,' A:*E!&D,' :,?*&!(&.'' ("".'' %>:,G' >!B',"-'G!%>' >!'' -*:D,'!&%*' !D*A*"!'' *&' %>,' (,B.'' (&6' G('' >,:,'?,'!,),6'?C'%>,' *%>''H %>,',' (%' %>,'' '(B,'%!B,' A!""(),6' >:(D,' (&6'?,'!,),6'!%'' D(A!%("' %>,'):,(%' (&6' '%:*&)' >!"!AA*A*"!''H !&6,,6'%>,C':,(D>,6' ('-(:' (' (D,L 6*&!(' (&6' !&E,'%,6' >,''("*&!D(' G>,:,' %>,')*E,:&*:' :!'D.''-*.&6'%>!'' ;.'%' (' -!%%!&)' B*B,&%'*'>(E,' >!B',"-A:*D"(!B,6' (' ,BA,:*:' >,&' ,D!.'' (::!E,6'%*' D*B?(%' (%'*&D,' >!'' :!E('' (&6'%>,' A.?"!D'-*,'%>,'-*:B,:'G('' 6*.?%L ","'' G!%>*.%'6!--!D."%C','%' ('!6,' (&6''.DD,''' ("'*' (%%,&6,6' %>,' :,"!,-'*-' !D*A*"!'' G>,:,' Z[[[[' *%>'' (:,' '(!6' %*' >(E,' -("",&' .%'%>,' *%>'' :,%:,(%!&)' %*' >:(D,' D*&L I.,:,6'!&'%.:&' (%' ,:*,' # "%JX()*:(9'%>:,G'%>,' *B(&'' ?(DF' *&' *,'!(' (&6':,6.D,6' !D*A*"!'' %>,:,' ('' G,"" ('' &D>!(".'' !&' >:(D,' (&6',E,&' >!"!AA*A*"!'' G>,:,' /[[[[[' B,&(:,' '(!6'%*' >(E,' D*B,' !&%*' %>,!:' A*G,:' >,:,.A*&'%>,C' B(:D>,6'&*:%>G(:6'' %*' ?:!&)' !&%*' '(-,%C' %>,!:' ,&*:B*.'' ?**%C' ,D!.'' A:*;,D%,6' %>,' A"(&'*-' !&L -"!D%!&)' (' ?"*G'*&'%>,',&,BC'(%'%>,'D:*''!&)'*-'%>,' (&.?,' ,' '%(%!*&,6' (' 6!E!''!*&' .&6,:' ("".'' *&' %>,' ?(&F' (&6' >*A,6'%*' ?,' (?"," %*' %>:*G'%>,' *%>'' .A*&' %>!'' (&6' %*

D.%' *--' %>,!:' :,%:,(%' .%' (%' ?:!%%.'' (' A"(D,' *&' %>,'
,'!(&' -:&%!,:' %>,' -*:%!.:-!' *-' G(:' *:',"',' %>,' %:,(D>,:C'
*-' ("".'' 6,D!6,6' ()(!&'% %>,B' ,D!.'' A,:!'>,6' G!%>' !''6,(%>'
>!'' '*&' (&6' ("".'' G>*' G('' A:*D"(!B,6' ('' >!'' '.DD,''*:'
?,)(&' >!'' :,!)&' ?C' *&D,' B*:,' (''.:!&)' %*' %>,' *%>'' %>,'
(&&.(' A(CB,&%'' *-' B*&,C' #RM/9 ' >!'' .%%,:'6,-,(%' *-'
*B(&' (:B'' ('' *-' *B(&' A*"!DC' %>,' -("' *-' %>,' ,BA,:*:'
%>,' -!:'% G>*' "*'% >!'' "!-,' !&' D*&-"!D% G!%>' %>,' ?(:?(:!(&'K '
(' A!,D,' *-' &,G'' G>!D>'6,,A"C' B*E,6' B,&'' B!&6'' ,E,&' !&'
%>!'' (),' 6,B*:("!',6' ?C' !%'' -(B!"!(:!%C' G!%>' B!'-*:%.&,K '
%>,' 6!'):(D,-.' D(A!%."(%!*&' -*""*G!&)' %>,:,*&' A"(D,6' !&'
-(D% %>,' !&%,):!%C' *-' %>,' ,BA!:,' (% '%(F,' ,:!*.'' D:!','
&' %>,' B!66",' (&.?,' %>:,(%,&!&)' A:?(?"C' %>,' "*'' *-'
(D!(' B.'% >(E,' ?,,&' %>,' !B B,6!(%,'D*&',I.,&D,' &D,'
B*:,' %>!'' G('' (E,:%,6H %>,')*E,:&*:'*-' (&&*&!(' (:D.''
,B!"!.'' ,B!"!(&.'' (')**6' '*"6!,:' (D>!,E,6' (&' !BL
A*:%(&% '.DD,''' *-' (:B' ' (&6' 6:*E,' %>,' ,&,BC' *E,:' %>,'
-:*&%!,:' .%' ,B,'!'' ?*:,' 'G(C' >,' D*&',I.,&D,' *-'
%>!'' E!D%*:C' (D>!,E,6' !&' %>,' &(B,' *-' ("".'' G('' %>(% %>,'
(:BC' :,&*.&D,6' ("",)!(&D,' %*' %>,' ?,%:(C,:' *-' ,D!.'' (&6'
D>*',' %>,!:'),&,:(' (' >!'' '.DD,''*:' &D,' B*:,' %>,:,L
-*:,' D!E!'' G(:' %**F' A:,D,6,&D,' *-' -:*&%!,:J6,-,&D,H (&6'
G>!",' ,B!"!(&.'' &*' 6*.?% E(&I.!'>,6' ("".'' !&' %("C'
?.% '**&' (-%,:G(:6'' '.DD.B?,6' %*' >!''),&,:(' (",:!J'
(&.'' #RMS9' (D!(' G(' "*'% -*:' %>,' ,BA!:,K >*G' (&6' #)D
%*' G>*B' G,' F&*G' &*% ' >,' "('% D*!&' '%:.DF' ?C' %>!''
A:*E!&D,' (&6' %>,' "(%,'% !&'D:!A%!*&' -*.&6' %>,:,' (:,' *-'
%>,' C,(:' RMM' %>,' "('% D*!&' *-' %>,' &,!)>?*.:!&)' !B!J'
&(D!.B' !&' .AA,:' *,'!(' *-' %>,' -*""*G!&)' C,(:H !&' %>,'
-!:'% C,(:'' *-' (",:!(&.'' (&6' (""!,&.'' %>,:,-*:,' %>,' ?(:L
?(:!(&'' *DD.A!,6' %>,' *B(&' %,::!%*:C' *&' %>,' ",-% ?(&F

f >,':,A*:%'' *-' %>,','*DD.::,&D,'' '*B,' B,('.:,'D*B?!&,6' >,''(B,'
!&' X*'!B.':,' !' R/JRS' X*&(:('' @!!'' '*.:D,'' "!,'' (% %>,' ?*%% *B' *-' %>,' !BL
R[' BB!(&.' @@@!' M' /1' /N' A,:!(" ?!*):(A>!,'' (&6' +*:6(&,'' H ?.%'
#G>!D>' (DD*.&%'' 6*G&' %*' %>(% D*&L ?*%>' >(E,' 6!'-!).:,6' (&6' -("'!-!,6'
D,:&!&)' >!''AA A*"!'' (:,' -!@,6' (" !%' %*' '.D>' (' 6,):,,' %>(% .',' D(&' ?,'
?,"*&)!&)' %*' %>!'' %B,' ?C' %>,' -(D% B(6,' *-' %>,!:' '%(%,B,&%'' *&"C' G!%>'
%>(% %>,' "(%%,:' :,D.:'' !&' X*'!B.'9'):,(% D(.%!*&' !D%*:' !$' RO' !''
("%>*.)>' ("" -:()B,&%(:C' *:' !&' 6!'L !&6,A,&6,&%
*:6,:' B(C' >(E,' -"*G,6' -:*B' %>,' ' ,:>(A'' %>,' !::.A%!*&' *-' %>,'
:,A*:%' *-' ,@!AA.'' *-' G>!D>' ' /1' (:B*B(&!' !&' X*'!B.'' !' RO' :,-,:''
/O' (:' A:,':E,6' (&6' B(C' ?,' !&' %*' %>!'

-' %>,' (&.?,' (&6' D,:%(!&"C' ("'' A:,'',6' (D:*''' %*' %>,' :!)>%

,-*:,' G,' A.:'.,' -.:%>,:' %>,' 6,E,"*AB,&%' *-' (--(!:'' *&' %>,' "*G,:' (&.?,'!%'(AA,(:'' &,D,''(:C'%*' D('%' (') "(&D,' (%' A!:(DC' ('' !%' G('' %>,&' !&' E*).,' !&' %>,' ,('%,:&' >("-' *-' %>,' ,6!%,::(&,(&' (&6' %>,' B(:!%!B,' ,@A,6!%!*&'' *-' %>,' *%>'' (&6' %>,!:' (""!,'' *:!)!&(%!&)' -:*B' !%

!:(DC' *&' %>,' "(DF' ,(>(%' %>,' *B(&'-",,%' D*."6' (%' &*' %!B,' ?,' 6!'A,&',6' G!%>' *&' %>,' "(DF' ,(' (&6' A!:(DC' %>,:,' G('' A:*?(?"C' &,E,:' ,@%!:A(%,6' G('' !BA"!,6' !&' %>,' E,:C' &(%.:,' *-' %>,' *B(&' :.",' (' !%' >(6' %(F,&' '>(A,' *&' !%'' D*('%'' >,' *B(&'' G,:,' !&' -!:B' A*'',''!*&' *&"C' A,:>(A*' -:*B' %>,' B*.%>'' *-' %>,' (&.?,' ('' -(:' (' :(A,Q.'' %' !'' %:.,' %>(%' *&' %>,' *&,' >(&6' C:(' (%' %>,' B*.%>' *-' %>,' &!,'%,:' (&6' "?!(' *&' %>,' ?(C' (%' %>,' B*.%>' *-' %>,' &!,A,:' *&' %>,' *%>,:' '!6,' %>,' (.D('!(&' >(:?*.:'' !&' %>,' :,)!*&'' *-' %>,' B*6,:&' .D>.BJ (",>' !*'D.:!('' (&6' !%C.'' G,:,' *B(&' >,' !&%,:E,&!&)' *'A*:(&' F!&)6*B' !&' %>,' :!B,(' ("'*' '%**6' .&6,:' *B(&'A:*%,D%!*&' (&6' >(6' (' *B(&')(::!'*&' '.?;,D%' %*' %>,')*E,:&*:'' *-' *,'!(' .%' *&' %>,',' '>*:,'' -*:' %>,' B*'%' A(:%'-(:'-:*B' !&E!%!&)' %>,:,' G,:,' *&"C' %>*',' A*'%'' -*:B,:"C' >,"6' ,!%>,:' (' *"6' :,F' ,%%",B,&%'' *:' (' *B(&'-*:%:,'',''H %>,' D*('%' !%',"-G(' 6,'*"(%,' *:' !&' %>,' >(&6'' *-' %>,' &(%!E,'' -!""!&)' %>,' !&%,:!*:' G>*' D*BA:,L >,&6,6' .&6,:' %>,'),&,:(' &(B,' *-' DC%>!(&' B*'%"C' *-' (:B(%!(&'6,'D,&%' &,E,:' G,:,' *:' G,:,' %*' ?,D*B,' '.?;,D%' %*' %>,' *B(&'' H !%' G(' ,&*.)>' !-' %>,C' 6!6' &*%' 6!:,D%"C' "(C' >(&6'' *&' %>,' *B(&'' *:' %>,!:'D"!,&%'' DD*:6!&)"C' !%' !'' &*%' %*' ?,' G*&6,:,6' (%' %>(%',E,&' !&' %>,' %!B,' *-' !?,:!.'' %>,' A!:(%,'' *-' %>,' ,('%' D*('%' &*%' B,:,"C' B(6,' %>,' "(DF' ,(' !&',D.:,' ?.%' ("'*' "(&6,6' (&6',E!,6' D*&%:!?.%!*&'' *&' %>,' E!""(),'' (&6' %*G&'' *-' %>,' D*('%' -' .&6,:' !.'' *:' (:D.'' (' ?(&6' *-' %>,' *'%*?*D!' 6G,""!&)' *&' %>,' &*:%>L G,'%,:&' '>*:,' -,"" .A*&' %>,' !&"(&6' %*G&' "(%,!(' !%.(%,6' !&' %>,' >,(:%' *-' >*D!'' (&6' D(B,' %*' ?"*G'' .&6,:' !%'' G(""'' G!%>' %>,' D!%!Q,&'' %>!'' ,E,&%' G>!D>' D,:%(!&"C' *&"C' ?C' (DD!6,&%' '%(&6'' -*:%>' -*:' .'' (' !'*"(%,6' '>*G'' %>(%' %>,' '(B,' A>,&*B,&(' G>!D>' A:,D,6,6' %>,' 6*G&-("" *-' %>,')*E,:&B,&%' *-' %>,' ',&(%,' G,:,' &*G' :,&,G,6' (&6' ,E,&

G!%>' %>,' !BA,:!(" A*G,:' B(!&%(!&!&)' !%',"-' *.%G(:6"C' .&'>(F,&'&*%B,:,"C !&6!E!6.(" A!:(%!D(" '>!A'' ?.%' 'I.(6L :*&'' *-' A!:(%,'' D:.!',6' !&' %>,' "(DF' (&6' ,E,&' !&' %>,' ,6!%,::(&,(&' ',('' >,' 6,D"!&,' *-' %>,')*E,:&B,&%' D",(:"C 6!'D,:&!?",' (-%,:' %>,' 6,(%>' *-' ,E,:.'' (&6' (?*E,' ("" (-%,:' %>,' (!6' *-' %>,' "('%' 6C&('%C' B(&!-,'%,6' !%',"-' %>,&' (' G(' &(%.:("' ,'A,D!("" C' !&' %>,' -.:%>,:' 6,D(C' *-' B(:!&,' A*"!D,' >,' (DD*.&%'' !&' 6,%(!" -(:' -:*B' %:.'%L G*:%>C' B,&%!*&' (":,(6C' !&' %>,' %!B,' ?,-*:,' ,D!.'' %>,' (AA,(:(&D,' *-' ('):,(%-",,%' *-' A!:(%,'' !&' %>,' ,),(&' ,(' H %>,&' .&6,:' ,D!.'' %>,' A".&6,:!&)' *-' %>,' (BA>C"!(&' D*('%' (&6' *-' %>,' :(,D*J '!(%!D' !'"(&6'' H .&6,:' ("". '' B(:(.6!&)'' *-' A!:(%,'' !&' '!(' !&*:' (' -(:' (' ,''!&.'' (&6' A>,'.' ' >,',' G,:,' A:,6(%*:C',@A,6!%!*&'' >,',' D*B:(6,'' A".&6,:,6' %>,' D*('%'' -(:' (&6' G!6,' (&6' B(6,' ,E,&' (''G,' ',,' ?*"6' :(!6'' !&%*' %>,' !&%,:!*:' H ?.%' &*%>!&)' !'' B,&%!*&,6' *-' %>,' 6,'%:.D%!*&' *-' %*G&'' (&6' %>,' A!:(%,'' '>.&&,6' D*B!&)' !&%*' D*""!'!*&' G!%>' *B(&' %:**A'H %>,' (%%(DF' G(' D>!,-"C 6!:,D%,6' ()(!&'%' '.D>' :,)!*&'' (' >(6' &*' %:**A'' '%(%!*&,6' !&' %>,B

&6,:' (",:!(&' %>,',' ,@A,6!%!*&'' ('' .B,' (' 6!--,:,&% (:!%!B,' D>(:(D%,:' >,' &(%.:,' *-' %>,' :(!6'' E(:!,'' '*' B.D>' -:*B' %>,' ,(:"!,:' %>(%' %>,' :(!6' !&' !%',"-' &*%' 'A,D!("" C' !BA*:%(&%' (&6'("'!,'' *-' %>,' *:(&!' ()(!&'%' !%C.'' .&6,:' (",:!(&' D*."6' ?,' 6,'!)&(%,6' ?C' !&%,""!),&%' :,A*:%,:'' A:,D!',"C' (' %>,' ?,)!&&!&)' *-' %>!'' B*E,B,&% ' (&6' %>(%' %>,' A!:(%,'' G,:,

' BB!(&.'' @@@!'M' H' 4# #' "!=# ' -#'*$ #&' * '$&' #' * " 4 ' +'&- +! # '%$".' && "&' +!&$ =!$' & ! $!$' $4 4$ #"'&' 6& 4$ ' !+$!'&$!' ! 6#$' '!%$ L' $4' !&" 8!' # # ' *! &$' !G !' $=$ &$ #"&' G>,:,.A*&' %>,' D(%(L '%:*A>,'*-' %>,' ,D!!'!" &(::(%,6' (&6' !&%*' %>!'!"!&G*E,&'%>,'-..:%>,:'&*%!D,'P $!$' ! *-' !$'+=&!&$'#%*'G>!D>' B.'% ?,"*&)' %>,' '!,),' *-' !6,' !&' ,@!AA.'' >!B','-' -!:' RZ9' " # !$' * *# !&+$' + *# $ ' (' ("'*' %>,' '!,),' *-' CQ!D.'' -' !&' %>!" :,%:*'A,D% ("" !'' &*% D*&-.',6K G>!D>' D(&&*% G,"" ?,' (''.B,6' %*' ?,' %>,'D(',' G!%>' BL B!(&.'K %>!" -("" ?,-*:,'%>*',' &(E(" ,@A,6!%!*&'' G>!D>' ?,)!&' G!%>' %>,

'!,),' *-' !%C.'' (&6' (:,' B*:,' (' A(:% *-' %>,' B!):(%!*&' *-' A,*A","' %>(&' A!:L (%!D(" :(!6'' >,' &.B?,:' *-' %>,' '>!A" B!)>% !&6,,6' ?,' %:(&'-,::,6' >!%>,:' ?C ,::*:' *-' B,B*:C' -:*B' %>,' ,@A,6!%!*&' *-' %>,' C,(:' R1O' *' %>,' '(B,' D*&L &,D%!*&'?,"*&)'' %>,' &*%!D,' !&' X*'!B.'' !' RO' (" %*' %>,' DC%>!(&' ,@A,6!%!*&'' !&%*' '!(' (&6' (AA(6*D!(' (" -(:' (" A>,'.'' (&6' ,''!&.'' >,' (DD*.&% (' %*' A>,'.'' !&J %>,' ?!*):(A>C' *-' ("'!,&.'' D' 1' !'' %>,' '(B,' ?.% %:(&'A*',6' ("%*' %!B, ' &' %>,' D(',' *-' X*'!B.'' >!B','-' G,' '>*."6' &*% ,@A,D% D*BA",%,'.&6,:L '%(&6!&)'*-'%>,' B(%,:H ?.%>!''E*.D>,:' ,@!AA.'' G>*' G(' (' D*&%,BA*:(:C' (&6' %**F' A(:% !&' %>,' B(%%,:' F&,G

) ' " + " ', * % '

-*:' ('"*&)'%!B,' D("",6' !&' '!('?C'%>,'&(B,'*-'%>!''%:!?,' &*%'*%>,:G!','F&*G&'%*' .'' >,',',@A,6!%!*&'' A:*D,,6' &*'"*&),:'-:*B'%>,'*"6'&(%!E,'6G,"",:'' ?,'!6,'%>,' "(DF' ,('?.%'-:*B'%>,'>*:6,'' A:,''!&)'?,>!&6'%>,B' >(%' >(6'>!%>,:%*'?,,&'A!:(DC'?,)!&''%*'-*:B'('A*:%!*&'*-'%>(%' B!):(%*:C'B*E,B,&%'*-'A,*A","'%*'G>!D>'%>,' (6E(&D,'*-' %>,' *%>'' *&'%>,' "*G,:' (&.?,'?,"*&)'' >,'A,*A","' %(F!&)'A(:%'!&'!%'(:,'E,:C'E(:!,6'(&6'!&'A(:%'"!%%",'F&*G&H !&'%>,'"(%,:',@A,6!%!*&''%>,' ,:B(&!D' ,:."!'%>,&'6G,""!&)' ?,'!6,'%>,' (,*%!'' (AA,(:'%*'>(E,'A"(C,6'('",(6!&)'A(:%' >,' *%>'' ("'*'%**F'A(:%'?.%''*'-(:'('',(JE*C(),'' (:,' D*&D,:&,6K (&6'%*",:(?"C',@(D%':,A*:%''*-'%>,',',(:,'?,-*:,' .'K &*%'!&'('A:*B!&,&%'B(&&,:H '%:!D%"C''A,(F!&)'%>,',', ,@A,6!%!*&'' (:,' B*:,' D*::,D%"C'%,:B,6' DC%>!(&'%>(&' *%>!D' >,' B(:!%!B,'D,&%:,'*-'%>,',' ()):,''!*&'' G('' %>,' B*.%>'*-'%>,' &!,'%,:'%>,'A*:%'*-' C:(' >,' :,,F'%*G&'' *-'%>,' *'A*:.'' (?(&6*&,6'%>:*.)>'%>,' ?(&F:.A%DC'*-'%>,'!BA,:!('A*G,:'G!%>*.%'A:*%,D%!*&'%*' %>,'>*:6,''A:,''!&)'*&G(:6'(&6',@A,D%!&)'%*'?,'?,'!,),6' ?C'%>,B'D*&',&%,6'>("-.&6,:'D*BA."'!*&'>("-'E*".&%(:!"C' %*' D*&E,C'!&'%>,!:'E,'',"'(&6'?C'%>,!:'B(:!&,:''%>,'!&L D*&E,&!,&%'&,G'&,!)>?*.:'*E,:'%*'%>,' &,(:,'%' *B(&' A*'',''!*&'*&'%>,' &*:%>'D*('%'*-' *&%.'K -*:' G>!D>' %>,','&,!)>?*.:''%>,B','E,''"(DF,6'%>,'&,,6-.'B,(&''(&6' %>,'&,,6-.'F!""'%'G('%>.''%>(%'%>,',@A,6!%!*&'()(!&'% !%C.''G('?:*.)>%'(?*.%' >,' *:(&'G,:,'"(&6,6'(&6'D*&-!6,&%'*-' '.DD,''' ',&%'?(DF'%>,' '>!A'' .%'%>,' :,'*".%,'D*BB(&6,:'*-' !%C.'' .DD,''!(&.'' :,A,"",6'%>,' (%%(DF'H (&6'%>,'(''(!"(&%'' -,(:!&)'%>,'(::!E("'*-'%>,'*%>,:' *B(&')(::!'*&'' >('%!"C' G!%>6:,G'-*:'G>!D>'%>,C'>(6' 6!--!D."%C'!&'A:*D.:!&)'%>,'&,D,''(:C'%:(&'A*:%''' .%'%>,

G,"" G>C'>,'%,:B,6'%>,' !%>C&!(&' ,@A,6!%!*&'%>,' $# *!' [* *'' #X*'' !' ZM9'H (&6',E,&'!&'X*'!B.'' G,' 6!'D,:&'D",(:"C'%>,'D*&%:('%'!&%,&6,6' ?C' ,@!AA.'' ?,%G,,&'%>,' ,@A,L 6!%!*&'*-'%>,' *:(&!'()(!&'% !%C.'' (&6' :(A,Q.'' (&6'%>,'%:(6!%!*&(" A!:(%!D'E*C(),'' &'%>,'?!*):(A>C'*-' ("'!,&."%>,' DC%>!(&',@A,6!%!*&'%*' (AA(6*D!('&(::(%,6'(%'D'!!''.&6,:

%>,'C,(:'R1S'B.'%'?,'%>(%'*'%>:(A,Q.'' ;.'%'('%>,' !%>C&!(&'%>,:,G!%>'D*&L &,D%,6'B.'%'?,'%>(%'G>!D>'X*'!B.'' %,:B''%>,''',D*&6'H ,:,'!&6,,6',E,:CL %>!&)'!''D*&-.',6

f >!'' !'' '(!6'?C'X*'!B.'' !' SR' (&6'-*""*G'' ("'*' -:*B'%>,'':,"(%!*&'*-' %>,' *'A*:(&''%*'%>,'-!:'%'#!'ZR9'(&6' %>(%'*-'%>,'-!:'%'%*'%>,'',D*&6',@A,6!L %!*&'#!'ZS9

A"(&' G('' &*%')!E,&' .A'H !&' %>,' &,@%' C,(:' %>,C' D(B,' ?(DF'
(&6' ('' %>,' D*BB(&6(&%' >(6' B,(&G>!",' ?,,&' D>(&),6'
%>,'-*:%:,''' '.::,&6,:,6' >,' *:(&" 'G>*' %>!'' %!B,' >(6' *' :(J
:,%(!&,6' %>,' *'A*:(&E,'',"'' (&6' >(6' %>,:%!' B(&&,6'?C'
A:,'',6' B(:!&,:'' (&6' *B(&' D(A%!E,'' A*'',',6' %>,BL
',"E,'' *-' %>,' D*('% -(:' (&6' G!6,' (&6' :,(D>,6' ('' -(:' ('
:(A,Q.'' &%*' %>!'' G,"" -*:%!-!,6' (&6' '%:*&)"C')(::!'*&,6'
%*G&' ("" >(6' -",6' (&6' %>,' ?(:?(:!(&'' G,:,' &*%' !&' ('
A*'!%!*&' -*:' (' :,(" '!,),' .%' %>,' ",(6,:'>!A' *-' %>,'
B(&'' G(' ?(6' (&6' %>,' B!"!%(:C' 6!'D!A"!&,' '' *&' %>,'
6,D"!&,' %>(% &*% ,E,&' %>,' G("'' G,:,' *DD.A!,6'H '*' %>,'
?(:?(:!(&'' 'D(",6' %>,B' ?C' &!)>%' G!%>*.% ,&D*.&%,:!&)'
:,'!'%(&D,' (&6' !&' %>,'):,(% (&6' :!D>' D!%C' ,&*:B*.'' ?**%C'
!&D".6!&)' (' &.B?,:' *-' '>!A' -,"" !&%*' %>,!:' >(&6'
>,C' :,%.:&,6' '.DD,''-." -:*B' %>,' -(:' 6!'%(&%' "(&6' %*'
%>,' (,*%!'
@D!%,6' ?C' %>!'' '.DD,'' ' (' ',D*&6' ,@A,6!%!*&' *-' *%>,:' *' !%>CJ
?.% &,!)>?*.:!&)' DC%>!(&' ?(&6'' G('' !&' %>,' -*""*G!&)'
G!&%,:' 6!:,D%,6' ()(!&'% !%>C&!(' % !'' '!)&!-!D(&% *-' %>,'
.&',%%",6' '%(%,' *-' %>!&)'' %>(% %>,' !&'%!)(%*:' *-' %>!'' B*E,L
B,&% G(' >:C'*)*&.' ' (' :,,F' *-' !D*B,6!(' (&6' %>(%
>,' G(' >!)>"C' >*&*.:,6' ?C' %>,' ?(:?(:!(&'-*:'!%'' '.DD,''-."
:,'.'%' >!'',@A,6!%!*&' G('' .&6,:%(F,&K (' %>,' &,D,''(:C'
&.B?,:' *-' '>!A' G('' &*%' %*' ?,' A:*D.:,6K A(:%"C' ?C' "(&6'
A(:%"C' ?C' G(%,:H !%' G('' *&"C' !&' %>,' &,!)>?*.:>*6' *-'
CQ(&%!.B' %>(% %>,' A!:(%,'' '.DD,,6,6' !&' A*'',''!&)' %>,BL
',"E,'' *-' (' D*&'!6,:(?",' &.B?,:' *-' -!'>!&)J?*(%' ' (&6' '*'
%>,C' (::!E,6' ("*&)' %>,' '!(%!D' D*('% (% >("D,6*&' G>*',' '
'%:*&)')(::!'*&' *&' %>!'' &,G'' :(&' *--' *% B,:,"C' %>!''
%*G&' #,"" !&%*' %>,!:' >(&6'' ?.% ("'*' ("*&)' %>,' D*('%
!D*B,6!(' >!*'' A(B,(H !&' %>,' !&%,:!*:' !D(,(' (:!6'
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:,(D>,6' (''-(:' (' >C&6(D.'' >,&D,' %>,C' '(!",6' >*B,'
"(6,&' G!%>' %>,' %:,('.:,'' *-' %>,' :!D>' "(&6' (&6' *-' !%'' D*&L
'!6,:(?",' D!%!,'
>,' ,@A,6!%!*&' ()(!&'% !%>C&!(' >(6' (":,(6C' ?,,&' *' :,,D,'
.&6,:%(F,&' !&' A(:%?C'"(&6'H ("" %>,' B*:,'G,:,' %>,' (%%(DF''
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>:(D,' G,:,' &*%' A,:B(&,&%"C' *DD.A!,6' ?C' %>,' *%>''
%>,C' C,%' D(B,' (&6' G,&%' %>,:,' ('' !-' %>,C' G,:,' (%' >*B,'
(&6' :*E,6' -:*B' %>,&D,' -(:' !&%*' (D,6*&!(' E,&'
D>(!('',@A,D%,6' .&6,:' (",:!(&' !&E('!*&'-:*B' %>!'' '!6,H
>,:B*AC"(,' (&6' %>,' '%>B.'' G,:,' ?(::!D(6,6' (&6' %>,'
%>,&!(&'' ',%'%*' G*:F'%*' :,'%*:,' %>,!:' G(""'' %>(%' >(6' "(!&'
!&' :.!&'' '!&D,' %>,' '!,),' ?C' ."""(' >,' ?(:?(:!(&'' 6!6'
&*%' D*B,' %>,&' (&6' ?C' %>!'' :*.%,' .%' .&6,:' (""!,&.''
(' -",,%' *-' -!E,' >.&6:,6' '(!'' %>!'' %!B,' D>!,-"C' ,:."!'
(AA,(:,6' ?,-*:,' %>,' A*:%' *-' CQ(&%!.B' G>!D>' >*G,E,:'
>(6' &*%' C,%' "*'%' !%'' D(A(D!%C' *-' 6,-,&D,H %>,' '>!A'' *-'
%>,' CQ(&%!&,'' '.DD,''-.""C':,A."',6' %>,' :*??,:'' >,',''
'(!",6' *&G(:6' '>*G,6' %>,B','E,'' *&' %>,' '!(%!D' D*('%'
?,-*:,' CQ!D.'' &*%' -*:B,:"C' (%%(DF,6' (&6' (::!E,6' -:*B'
%>,&D,'?C' G(C' *-' ,B&*'' (&6' B?:*'' (%' :,,D,'A:*A,:'
%>,&'' *:!&%>' :)*'' A(:%('G,:,'A!"")(),6'(&6'6,'%:*C,6'
%' G('' ("G(C'' '*B,%>!&)' %>(%' ('' !&' %>,' %!B,'' *-' %>,'
,:'!(&' G(:'' %>,' D!%!Q,&'' *-' %>,' 6,'%:*C,6' %>,&'' %G*'
%>*.'(&6' !&' &.B?,:'' "(!6' (&' (B?.'>' -*:' %>,' :,%!:!&)'
?(:?(:!(&'' (&6' .&6,:' %>,' ",(6,:'>!A' *-' %>,!:' ,I.(""C'
",(:&,6' (&6' ?:(E,'D(A%(!&' .?"!.'' ,:,&&!.'' ,@!AA.''
*-' %>,' *"6' (&6' &*?",'-(B!"C' *-' %>,' ,:CF,'' G!%>' '.AA*:%'
*-' %>,' *B(&'-",,%' !&-"!D%,6' (' &*%(?"' "*''' *&' %>,' A!:(%,''
&' %>,' :,%.:&' >*B,' G>!D>' %**F' A"(D,' !&' A(:%' ?C' %>,'
"(&6' :*.%,' %>,' ,BA,:*:' (""!,&.'' (%%(DF,6' %>,B' !&'
>:(D,' (%' %>,' :!E,:' ,'%.'' (&6' A.%' %*' 6,(%>' (' D*&'!6,:L
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>,'!BL A,:!("*)EL ,:&B,&%' *-' %>,' *%>!D' A,:!*6

&' *:6,:' D*BA",%,"C' %*' '.:E,C' %>,' B,('.:,' *-' B!'L
-*:%.&,' G,' B.'%' %(F,' !&%*' (DD*.&%' %>(%' !&' %>!'' ,BA!:,'
)*!&)' %*' '>:,6'' (&6' (?*E,' ("" !&' %>,' A:*E!&D,'' *E,::.&'
?C' %>,' ,&,BC' *&,' *--!D,:' (-%,:' (&*%>,:'):('A,6' (%' %>,'
D:*G&' G>!D>' >(:6"C' (&C' "*&),:' ,@!'%,6' %' !'' &*%' G*:%>'
%>,' %:*.?"' %*' :,D*:6' %>,' &(B,'' *-' %>,',' ,A>,B,:("

' >,':,A*:%'*-' ,@!AA.'' ('%*'%>!'' ,@A,6!%!*&' !'')!E,&' !&' ,@%:(D%' ?C' C&D,"'.'' A' N/N' #G>,:,' 6E,Y!E:*!' B.'%'?,':,(6'-*:' 6E,Y6EB9' X*'!B.'' !'ZO'(&6'%>,'?!*):(A>,:'*-' ("'!,&.'' D' /Z ' RR' !'' (' A*:%!*&' *-' >!'' *G&' &(::(%!E,' &' %>,' D*&%!&.(%*:' *-' !*'' *&' G>*B' X*&(:(" 6,A,&6' %>,' &(B,'' *-' %>,',' ,E,&%' !5' A"(D,6' .&6,:' "(.6!.'' %>:*.)>',::*:'*:'%>:*.)>' -("'!-!D(%!*&' G>!D>):.6),6'%>!''E!D%*:C%*' ("'!,&.'' >,' ?!*):(A>C' *-' ("'!,&.'' &(::(%,'' %>,' !&D!6,&%' (AA(:,&%"C' %G!D,' -!:'%' '>*:%"C' !&' D' 1' .&6,:' %>,' C,(:' R1R' H %>,&' ?,%%,:'.&6,:' *:' (-%,:' R1M' !&' D' /Z

G,(:,:'' *-' %>,' A.:A",H !%' B(:F'' %>,' '!%.(%!*&' %>(%' (-%,:' %>,' 6,E('%(%!*&' *-' !%>C&!(' ?C' %>,' A!:(%,'' %>,' ,BA,:*:'
(",:!(&' *B!%%,6' %*' ',&6' %>!%>,:' (&' ,@%:(*:6!&(:C' D*BL
B(&6(&%' ?,D(.',' ,E,:C'),&,:('' G('' &*%' G!%>*.%' :,('*&'
:,)(:6,6' ?C' >!B' ('' (' :!E("' >!'' D*J*A,:(%,6' %*' A:*6.D,'
%>,' ("B*'%' %>*:*.)>"C' A(''!E,' (%%!%.6,'*-' %>,')*E,:&B,&%'
!&' A:,',&D,' *-' %>!'' '*:,' ,B,:),&DC' ,%' *&' %>,' *%>,:'
>(&6' .&6*.?%,6"C' (')**6' A(:%' *-' %>!'' !::,'A*&'!?",'
A(''!E,&,'' !'' %*' ?,' %:(D,6' %*' %>,' A,:'*&("!%C' *-' %>,'
:.",:'H (",:!(&' G('' G,(F' (&6' (),6' ("'!,&.'' E,>,B,&%'
(&6' 6!''*".%,' (&6'&,!%>,:' %>,' *&,' &*:' %>,' *%>,:' G('
,I.('' %*' %>,').!6(&D,'*-' %>,'E,'',' *-' %>,' '%(%,'!&' (''%*:B'
(:D!(&.''%*'G>*B' ("'!,&.'' (-%,:'%>,'!&E('!*&'*-' D>(!('
>(6' D*BB!%%,6' %>,' D*BB(&6' !&' %>,',',:,)!*&'' *A,:(%,6'
&*%' G!%>*.%' '.DD,''H ?.%' %>,' B(%%,:'6!6' &*%')(!&' (&C'
:,('' %.:&'-*:'%>,' ?,%%,:'' '*'"*&)' (''' ("'!,&.'' *DD.A!,6' %>,'
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-%,:' %>,' B.:6,:'*-' ("'!,&.'' #R109' A,:>(A'' *&' %>,' *%>!D' E!DJ
&,G'' *-' !%' %>,' ?(:?(:!(&'' ()(!&' ",6' ?C' %>,' ,:."!' ?.%'](.6!.''
%>!'' %!B,' G!%>' .&!%,6' -*:D,'' .&6,:%**F' (&' (''(."%' *&' %>,'
!BA,:!('' -:*&%!,:'' '.D>' ('' %>,:,' >(6' &*%' ?,,&' >!%>,:%*' G!%>'
(' A*G,:-.'' -",,%' (&6' A:*?(?"C' (%' %>,' '(B,' %!B,' ?C' "(&6'
-:*B' %>,' (&.?, ' >,' -",,%' >(6' B.D>' %*' '.--,:' -:*B'
'%*:B'' !&' %>,' :*A*&%!''H %>,&' !%' 6!E!6,6' (&6' %>,' *%>''
(6E(&D,6' A(:%"C' ()(!&'%' >,''("C' (&6' :,,D,' A(:%"C'
()(!&'%' :,%,' (&6' >*6,'H %>,' D>!,-' B('''' :,'*:%,6' %*'
(D,6*&!(' (&6' %>,&D,'A,&,%:(%,6' !&%*' %>,' !&%,:!*:'?,C*&6'
6*.?%' !&' D*B?!&(%!*&' G!%>' %>,' ?(&6'' %>(%' >(6' B(:D>,6'
!&%*' >:(D,' .%' %>,' ,BA,:*:' "(.6!.'' G>*' B(:D>,6

/ &' *&!' %:(6!%!*&('' (DD*.&%'' %>!'' *-'%>,',@A,6!%!*&' (AA,(:'' ('' (' A.:,' ',(J
,@A,6!%!*&' (AA,(:'' ('' (' A.:,' ',(J E*C(),' .&6,:%(F,&' G!%>' #A:*?(?"C' R[[[' '>!A'' #'*' %>,' ?!*):(A>C' *-'
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B,&% 'C'%,B' %>(''(":,(6C' ?,,&' A*!&%,6' *.%'%>(%'%>,' D*:A''
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B,&%("",E!,''G>!D>' %>,' %:**A'' %>,&' &,,6,6' G,:,' A:*?(?"C'
"!F,G!',' %(F,&' D>!,-"C' -:*B' %>,' 6!'%:!D%'' !&' G>!D>' %>,'
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E,:C',BA>(%!D',@A:,''!*&'!&' %>,' :,-*:B' *-' %>,').(:6' .&6,:

,E,:.'' >!'' A:!B(DC' 6!6' &*%' A:*A,:"C' 'A,(F!&)' (--,D%' %>,' >!)>,:' 'A>,:,'' *-')*E,:&B,&%' '*' "*&)' ('' %>,' A*'!%!*&' *-' *--!D,:' '%!"'' D*!&D!6,6' G!%>' %>(%' *-' !BA,:!('' *--!D!("' ("%>*.)>' %>,' ,I.,'%:!(&' D(:,,:' G('' (DD,''!?",' %*' %>,' D*BL B*&' '*"6!,:' %>:*.)>' %>,' !&%,:E,&!&)' "!&F' *-' %>,' D,&%.:!*&J (%,' (%' (''' %!B,'' (&6' %>.'' %>,' ""C:!(&'' ,(:"C' -*.&6' %>,!:' G(C' !&%*' %>(%' D(:,,:H ('' !&6,,6' (":,(6C' !&' %>,' C,(:' RZM' (' &(%!E,' >:(D!(&' (!&'' +."!.'' (:.'' (@!B!&.'' !&' %>,' C,(:' RS0' (' &(%!E,' (&&*&!(&' :(;(&.'' ,D!.'' >(6' !&' %>!'' G(C' (%%(!&,6',E,&'%*' %>,' A.:A",' .%' G>,&' (""!,&.'' !&' (' 6!'%:.'%' D,:%(!&"C' ?.%%**' ,'''';.'%!-!,6' ,@D".6,6' %>,' D"('' *-'',&(%*:'' -:*B' ',:E!&)' ('' *--!D,:'' G>(%' >(6' >!%>,:%*' >,"6')**6' ('' %*' %>,' '*"6!,:'' ,D(B,' &,D,''(:!"C' ,@%,&6,6' %*' %>,' *--!D,:'' ("'*' %' G('' %>.'' !BA"C' (' B(%%,:' *-' D*.:',' %>(%' %>,' '*"6!,:'' ?,"*&)!&)' %*' %>,' (:BC' *-' %>,' (&.?,' (&6' B*'%"C' 'A:!&)!&)' -:*B' ""C:!(&'6!'%:!D%''A"(C,6'%>,&D,L -*:%' %>,' -!:'% A(:%('''*' !&')*E,:&B,&%' (&6' '*' -(:' (' %>,' (:BC' B(6,' %>,' ,BA,:*:'' %>,',' G,:,'' "!F,G!',' ('' %*' %>,' B(;*:!%C' ""C:!(&' >.'' (""!,&.'' G('' -*""*G,6' ?C' "(.6!.'' %>,' (:6(&!(&' .:,"!(&.'' -:*B' *,'!(' :*?.'' -:*B' (&&*&!(' !*D",%!(&.'' -:*B' ("B(%!(' (@!B!(&.'' -:*B' (&&*&!(' *&'%(&%!&'' -:*B' (:6(&!(' (",:!.'' -:*B' ,:6!D(H ('' %*' %>,' "('%' &(B,6' (&' (.%>*:' G:!%!&)' .&6,:' %>,' *&'%(&%!&!(&' 6C&('%C' ?:!&)'' !&-*' A:*B!&,&D,' %>,!:' 6,'D,&%' -:*B' ""C:!D.B' (&6' (66'' %>(%' %>,C' G!%>' "!%%",' D."%.:,' ?.%')**6' A:,"!B!&(:C' %:(!&!&)' ?C' "(?*.:' !&' %>,' -!,"6' (&6' ',:E!D,' !&' G(:' >(6' ?,,&',@D,"",&%' :.",:'' .D>' ',:E!D,' ('' %>,' "?(&!(&'' -*:' ('' "*&)' %!B,' :,&6,:,6' %*' %>,' .:F!'>' ,BA!:,' %>,!:' A:,6,D,''*:'' "!F,G!',' :,&6,:,6' %*' %>,' *B(&'!BA,:!('' '%(%,' G>,&' %>!'' >(6' (::!E,6' (%' '!B!L "(:' 6!'*:6,:' (&6' '!B!"(:' ?(:?(:!'B' &"C' %>,' ""C:!(&' :,),&,:(%!*&' *-' %>,' *B(&'!BA,:!('' *:6,:' B(C' &*%' ?,' D*&D,!E,6' *-' ('' (' &(%!*&('' :,*:)(&!'(%!*&H !%' G('' '!BA"C' %>,' A:*AA!&)' .A' ?C' '*"6!,:'' *-' (&' ,BA!:,' .%%,:"C' :,6.D,6' %>:*.)>' %>,' B!')*E,: B,&%' *-' :.",:'' *-'),&%",:' ?!:%>' %("C' >(6' G>*""C' D,(',6' %*' ?,' B!"!%(:CH (&6' >!'%*:C' 6*,'' &*%' (DF&*G",6),' %>,' :.",:'' :!)>%' G!%>*.%' %>,' G(::!*:'' A*G,:

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>,&(%",&)%>%>,B!)>%C:,A.?"!D*-%>,G,'% ,&%,:,6!&%*%>,'D*&-"!D%'>!%>,:%*!&'*B,B,('.:,'?("(&D,6 *-%>,B*&(:D>!,'*-%>,',('%(&6'**&'>*G,6!%',"-B*:, A*G,:-.'%>(&,(D>*-%>,':,,F'%(%,'%>,:,'%:!E!&)G!%> *&,(&*%>,:%>,(&>,"",&!D'A*"!DC?,D(B,:,&,G,6('%>, A*'!%!*&*-'.A:,B(DC?,D(B,'-!@,6,!%>,:%>,(D,L 6*&!(&'&*:%>,*B(&'G,:,',"",&,'!&%>,'-.'''',&', *-%>,'G*:6H!%!'!&6,,6'%>,'('6-,(%.:,'*-:,,F6,E,"*AL B,&%%>(%%>,%%!D'&(E('',BA!:,'G('B*:,'('>*A,'%>(& (':,("!%C'(&6%>,'G*:F'*-.&!*&'D*."6'&*%,B(&(%,'-:*B' %>,'?*'*B'*-%>,'&(%!*&!%',"-'>!",'!&('&(%!*&(' :,'A,D%%>,(D,6*&!(&'>,:,6!%(:CF!&)6*B'.%K G>(%!'%>,'D>!,- B(%%,:K%>,'(%%:(D%!E,'A*G,:*-%>,':,,F D>(:(D%,:'G(' A:*?(?"C-,"%B*:,'A,:B(&,&%"C(&6'6,,A"C?C%>,'*B(& ?.:),'',''%>(&?C%>,'%(%,'B,&*-(D,6*&!('';.'%?,D(.', %>,'-*:B,:'%**6(%('):,(%,:'6!'%(&D,'-:*B'!%%>(&%>, "(%%,:'>,'6,'!:,'%*'?,D*B,'(%",('%!&%,:&(""C,"",&J !',6'%*'?,D*B,'A(:%(F,:''*-%>,'B(&&,:'(&6'%>,'D.'%.:,' *-%>-'(:%(&6'%>,'D!,&D,'*-,"",('''%*'?,J !&'%>,'-**%'%,A' *-%>,')':,(%(D,6*&!(&K '>!,"6'(&6'G*:6'*-%>,':,,F' *-%>,'('%'(&6'%*'?,'("*G,6'-.:%>,:'%*'D!E!"!',%>!''('% &*%(-%,:'(&(%("!(A'?.%(-%,:'(,"",&!D'-('>!*&K %>!' 6,'!:,'A,:E(6,''%>,'"(%,:'D,&%.:!,''*-%>,'*B(&:,A.?"!D' (&6'%>,'?,%%,:'%!B,''*-'%>,',BA!:,'G!%>('A*G,:'(&6'(& !6,("!%C'G>!D>(:,'("B*'%&*",''':%:()!D'%>(&'%>(%'A*"!%!D(" %*!'*-'%>,' ,"",&,'-(!"!&)'%*'(%%(!&'!%'')*("' *:'?*%>' '!6,''%:*E,'(-%,:'%>,'!BA*''!?",'%*' ,"",&!D' (&J>,"",&!'B' %>,:,'G(' :,-.',6'6.:(%!*&'(&6'%*' *B(&' ,"",&!'B''*"!6' !&%:!&'!D'G*:%>' ,E,:%>,",''':!%'>(' ,'',&%!("C'!&-".,&D,6

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!!!'3ON3' '*BA'!!!'Z/R'Z/1' >,' ,"!(&'*-'%>,' %>,&!(&''-:*B' *B,'('(
3 3 ,@D(E(%!*&''*-':,D,&%'C,(:''>(E,'-.:L D*BB.&!%C'*-'%>,'T',"!(&''U'N*-'
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"!'Z[O %>,&''#!!'ZRO9':,B(!&,6'D*&'%(&%'C' %>,&!(&'(&6'D*&'%!%.%,6'!%','-'6*.?%L G(''()(!&' %>,&!(&'A*-'$*%'E'
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"!, :*?(?"C '.D> ,@D,A%!*&'* *DD.::,6 !& ,E,:C *B(& A:*E!&D,H ?.% %>!' G(' -:*B %>, *.%',% A,D."!(:* %* %>, :,,F %,::!%*:C %>(% A:,D!','C !%' %G*' B*'% &*%,6 D!%!,' G,:, ?,C*&6 %>, :(&), *-% %>, '.?;,D%J:,"(%!*& G>!D> (DD*:6!&)"C (--,D%,6 *&"C %>, 'B("",:D*BB*&G,("%>'

E,& -*:% %>, '.?;,D% :,,F D!%!,' ("",E!(%!*&' G,:, D!%CJ !&%:*6.D,6 (":,(6C.&6,:%>, :,A.?"!D > ,D!%CJ",().,' (% -!:'% A:*>!?!%,6):(6.("C (&6E,:C'**&:,E!E,6 ,'A,D!("C :,A.?"!D %>, 'B("",:(&6 A*G,:",'' *&,'' "!F, %>, *,*%!(& G!%> %>, ?,D*B!&)-(B!"!(:!',6 %*-*:,!)& :.", %>, *AA*'!%!*&("%,&6,&D!,' 6!'(AA,(:,6 G>!D> >(6 ?:*.)>% (?*.% %>,!: (?*"!%!*& (&6 %>,!:D"*',D*&&,D%!*&G!%> %>, %!B,J>("*G,6 +# &# D(:,-."C 'A(:,6 B.'% >(E, -.:%>,:* %*"6 !& %>,!: -(E*.:(' !&6,,6 !% >(' (":,(6C?,,& *?',:E,6 %>(% %>, *B(&:,A.?"!D :,'%*:,6 (&6 A:*%,D%,6 %>, BA>!D%!*&C !& !%' *:!)!&(" &*&JA*"!%!D(" -.&D%!*&' *G(:6' %>, ,&6 *-% %>, :,A.?"!D(& A,:!*6 %>,)*E,:&B,&% ', ,B' ,E,&% *-% %>(E, ("*G,6 %>, *,*%!(&' %* ,&%,:!I%*' (D*"",D%!E, .&!*& G!%> %>, 'B(" :,)!*&' (6;(D,&% %* %>, &*:%> (&6 %>, !'"(&6 *- .?*,(

3 >,%>,:%>,' = ! =' @(! ! G>!D>'&(%.:("C 6*,'' &*% *DD.:'!&' %>,' :,A.?"!D(&'A,:!*6 A:*A,:' G(' :,D*&L '%!%.%,6 (":,(6C(% %>,', &6*-'!% *:'&*% %!& (-%,:'%>,' !&%:*6.D%!*& *-' %>,' !BL A,:!(" A:*E!&D!(" *:)(&!'(%!*&' !" 6*.?%-." &'D:!A%!*&'' "!F,' %>,' "CBA!(&'*&,'*-'%>,'A:*I.(,'%*:'] &D>(:!.'']'-'A +-',$&#"%'/ON0' A' ZO'&'//S9'A,(F :(%>,:'!&'-(E*.:' *-' %>,' -*:B,:' '.AA*'!%!*&H C,% !% D(&&*% G!%>' D,:%(!&%C ?,' 6,'!)&(%,6' (' A:,J .).'%(&' >,' *"6,'% '.:,' ,E!6,&D,' -*:' %>,' ,@!'%,&D,' *-' %>!'' .&!*&!" %>,'!I'D:!A%!*&' ',% .A'?C'!% %*' .).'%."!& "CBA!('A +-' ,$&#"%' OT D' A' Z1'&'ZZ9' ,:>(A'' %>,',' G,:,' (::(&),B,&%" *-' %>,' 6!D%(%*:' (,'(:' (&6' !&' D*&&,D%!*&' G!%>' %>,)*E,:&*:'*-'T :,,D,UK A:*?(?"C%>,' D>(!('*-' %>,'!BA,:!(" A,:!*6K %*' ?,' B,% G!%>'!B6,:'>!B'# !D,:*' 4' ! E!' 1' /[9 K ,' B(C'(66 %>(% D,:L %(!&"C'("'* &6,:'%>,' :,A.?"!D'(DD*:6L !&)'%*'%>,'6!'D:,%!*&*-',(D>')*E,:&*:' -*:'%>,'%!B,'?,!&)'',E,:(" D*BB.&!L %!,''B!)>% B,,%-*:'('6,-!&!%,'*?;,D%?C' 6,A.%!,'' (&6' (6*A% :,'*"."%!*&'H (" %>,' @=*-'%>,' !D,"!*%'' %>.''6,D:,,6' (''%(%.,'%*' ,::,'' # !D,:*' ;$ '!' R' S1' //S9' '!B!"(:'%>!&)'' B.'% >(E,' *DD.::,6' !& :,,D,' ("'* .&6,:'%>,' :,A.?"!D' .% %>,':,),."(:' A:*E!&D!(" 6!,%'' G!%>' %>,!:' -!@,6' *--!D,:'' (&6' A:!,'%'' G,:,'(&' !&'!%.%!*&'*-' %>,' !BJ A,!!(" A,:!*6

>!'' !'%>,' ==' 6 o'', =' * '' ! '' *5@=*-%>,':,B(:FL (?",' !&'D:!A%!*&' A:*?(?"C ',% .A' '>*:%"C ?,-*:,' %>,' ?(%%",' *-' D%!.B' # ' ' &' !!!' M109' ,' D(&&*% A*''!?"C G!%>' !%%,&?,:),:' A +-' ,$&#"%' /ON1'A' RR[9' :,-,:' %*' %>!'',(),.',' %>,' &*%!D,' *-' (.'(&!('' #E!!' /1' /[9'%>(% %>,' *B(&'' T &*% B(&C C,(:''U' (-%,:'%>,'6,'%:.D%!*&'*-' *:!&%>' >(6 D*%&A(''!*&' *&' %>,' ,"",&,'' (&6' >(6 ()(!&' (""*G,6 %>,B' %>,' A:*E!&L D!(" .&!*&'' AM @4*&!'G! -' = ',2,6%:J *!' 6A@(!(9' %>!'' (AA"!,'' %* %>,' B!&*:'!&6!E!6.(" ",().,'

>,' D*A,'%*&,' *-' %>,' :,A.?"!D(&' ,A*D>' G(' ' %>,' (%*&,B,&%' -*:' %>,' '(DF' *-' *:!&%>' B(6,' ?C' %>,'):,(%,'%' *-'("" *B(&'' (&6' *-' (""' >!">,"",&,' ' %>,' 6!D%(%*:' (,'(:' !E' MSS' #!E' MNS9' (&6' %>,' :,&,G("' *-' %>,' '%(:' *-' ,""('' !&' %>,' -*:B' *-' (&' !&6,A,&6,&%' D*B B.&!%C' *-' *B(&' D!%!Q,&'' %>,' &,G' T+."!(&' *&*.:U

D>(!(' .&6,:' %>,' ,BA,:*:' >,',' G,:,' %>,' :,"(%!*&'' G>!D>' %>,' !BA,:!("')*E,:&L B,&%' (%' !%'' *.%',%' -*.&6' ,@!'%!&)' !&' :,,D,' (&6' !&' %>,',' A(%>'' !%' G,&%' -*:G(:6' >,' D*BB.&!%!,'' -:,,6' -:*B' %>,' !BB,6!(%,' !&%,:-,:,&D,' *-' %>,' A:*E!&D!("')*E,:&B,&%' (&6' -:*B' %>,' A(CB,&%' *-' %:!?.%,' %*' %>,',BA!:,' ^ !%>' G>!D>' %>,' D*"*&!,'' *-' *B(&' ?.:),'','' !&' B(&C' :,'A,D%'' '%**6' *&' (' ",E,"' D*BA:,>,&6,6' -(:' %>,' "(:),'%' (&6' ?,'%' A(:%' *-' %>,' A:*E!&D,' *-' D>(!(' P !&' %>,' ,"*A*&&,'.'' A(:%(' G!%>' !%'' %,::!%*:C' 6!B!&!'>,6' &*' 6*.?%'?.%' C,%' *&D,' B*:,' ,BL ?:(D!&)' %>,' &*:%>,:&' >("-' *-' (D*&!(' '%!"" %>,' D*.&%,:A(:%' *-' %>,&'' (' ,"" !&' !%'' A,%:!-!,6' *"6J-('>!*&,6' !&'%!%.%!*&'' (' !&' !%'' (%' ",('%' *.%G(:6"C' A:,',:E,6' *:)(&!'(%!*&' (&6' ?,(:!&)' H -.:%>,:' %>,' ,!)>%,,&' D*BB.&!%!,'' *-' %>,' -:,,' (D*&!(&'' %>,' '*.%>,:&' >("-' *-' %>,' (D*&!(&' :,)!*&' *&D,' A(:%(&' '.?;,D%'' *:)(&!',6' ?C' %>,' *B(&'' (' (A' !&6,LA,&6,&%' D!%!,'J",()., (-%,:' %>,' G(:' ()(!&'%' (?!'' (&6' "!F,' A(:%(' !&E,'%,6' G!%>' -:,,6*B' ?C' .).'%.'' "('%"C' !&' %>,' :,)!*&' *-' %>,' D>(,(&'' &*%' *&"C' CB,' G>!D>' >(6' ?,,&' (":,(6C' -.:&!'>,6' ?C' *BA,!.'' G!%>' A!:(%,JD*"*&!'%'' (&6' %>,&' >(6' :,D,!E,6' &,G' *B(&' ',%%",:'' -:*B' (,'(:3' ?.%' (?*E,' ("" (%:(,' G>!D>' .).'%.'' *&' (DD*.&%' *-' !%'

:' *' !%' ?,"*&),6' &*%' B,:,"C' %>,' &,!)>?*.:!&)' BCD"(,' ?.%' ("'*' (:J 6(BC",'#?C')!-%' *-' .).'%.'' (.'(&' !!!' R1' N9' >,:(,'# (.'(&' !E' Z[' R9' >.:!(' N ' !E' Z/' !9' (&6' -*:' (' %!B,' ("'*' :*&,'# ' 2' ' /RMOM' D*BA' ,?('J *.D(:%' !!' Z[M9' *&' %>,' ,'',&!(&').'-'M (&6' -.:%>,:' %>,' !'"(&6' *-' C%>,:('# !*' "!E' N9

R &' %>,' :,A.?"!D(&' A,:!*6' %>!" 6!'L %:!D%' (AA,(:'' (" :1' =-=' 4 ') !7 ! !=' # *.D(:%' *&' ,?('' !!' A' //[9H (.'(&!('' #!!;' R/' 19' !'' %>,:,-*:,' G:*&)' G>,&' >,' B(F,'' !%' &"C':,",(',6'-:*B' A(:%(' ?C' .).'L %.'' .%' %>,C'%,:B'%>,B','E,'' Y,J

J$* 04 =$' *&"C' -:*B' %>,' %!B,' *-' .).'%.'' (&6' %>,',?,'%*G('' *-' %>,,!:' -:,,6*B' !'' %>,:,-*:,' ;.'%"C' %:(D,6' %*' >!B

= >,:,'(:,' *!&"' *-' %>!'' D!%C' G!%>' %>,' ",),&6' +U !0' 0#540' >0# $0' (&6' %>,' >,(6' *-' (,'(:' *%>,:'' G!%>' %>,' ",),&6' +0 " 40' U# !P' U#%# !0' (&6' %>,' >,(6' *-' .).'%.'' ("*&)' G!%>' %>(%' *-' !?,:!.'' # B>**-J ".B,:' "" ! $ '% $+6#$ ' A' /1M9' >(%' .).'%.'' ('' !')&,6' CB,'%*' %>,' D*"*&C' *-' (%:(,'!'' A:*?(?"C' (&',::*:' *-' (.'(&!('' #E!!' /N' 9 H !%' :,B(!&"' !&6,,6' A*''!?",'%>(%' .).'%.'' !&' >!'' "(%,:' C,(:'' *:6(!&,6' %>!'' .&!*&

A*'!%!*&'-(E*.:(?",'-*:'D*BB,:D,'%:(&'-*:B,6'-:*B'('6,D"!&L !&)'>(B",%KA(:%"C'?C'6:(G!&)'%*),%>,:'%>,''B("'''.::*.&6L !&)' %*G&'>!A''A(:%"C'?C' ',%%",B,&%'*-'&.B,:*.'' %("!(&' E,%,:(&'K !&%*' %>,' B*'%' A*A."*.'' (&6' B*'%'-"*.:!'>!&)' D!%C'*-'%>,'A,&!&'."(' (&6'D*&'%!%.%,6' ('' (' *B(&'?.:),''J' D*"*&C' .&6,:' G>!D>' G('' ("'*' A"(D,6' (.A(D%.'' #%>,' %("!(&' ,A(&%*9' *&'%>,' *AA*'!%,' *D:!(&'D*('%' &'%>,' '%>B.'' *:!&%>' ('' !%' >(6'-*:B,:"C'?,D*B,' ('E!D%!B' %*' %>,' (6E(&%(),'' *-'!%'' '!%,'>(6'&*G'(-%,:'!%'' :,'%*:(%!*&' :(A!6"C':!',&'' '!B!"(:"C'%*' (:%>(),'(&6'>(6'?,D*B,'%>,' :!D>,'%' !&' !&6.'%:C'(&6' !&' A*A."(%!*&' *-'%>,' D!%!,'' *-' :,,D,'('' G,"' ('' %>,' :,).":' ',(%' *-')*E,:&B,&%' '' %>,' *:!&%>!(&'' G,:,'%>,'-!:'%' :,,F'' G>*'>(6':,D*)&!',6' %>,' *B(&'('' D*.&%:CB,&'?C'(6B!''!*&'%*'%>,' '%>B!(&')(B,''#!!'NO9''*'%>!'' %*G&'&*G'('%>*.)>' (' *B(&'?.:J !!J N J),''JD*BB.&!%C'%**F' D>(:),'*-'%>!''>!)>' :,,F'&(%!*&('' -,'%!E('' &'%>,' B(!&"(&6'%>,:,'?,"*&),6'%*'%>,' -:,,6' 6!'%:!D%'' &*%' B,:,"C' %>,&''G!%>'!%'' %,::!%*:C',B?:(D!&)' ('''%%!D('(&6'&.B,:*.'' !'"(&6''*-'%>,' ,),(&' ,('?.%' ("'*' (&():('(&6' >,'A!(,'(%'%>(%'%!B,'%>,'%G*'B*'%'D*&L '!6,:(?",'%*G&''*-'%>,' *,*%!(&'D*.&%:C'('(''"'*' "(%(,(,' !&' >*D!'' ,"A>!' ?(,' "(%,!('('G,''' ('%>,' B*'%'D*&L '!6,:(?",'*-'%>,' *D:!(&'%*G&'' BA>!''(' >(%'%>,' :,A.?"!D'>(6'?,).&' .).'%.'' D*BA",%,6'!&'%>,'(::(&),L B,&%;.'%''%'-*:%>'G>!D>'G('' (%",('%'!&'!%'' B(!&'*.%"!&,'' ',%%",6'?C'>!B'(&6'G('' (-%,:G(:6'' !&' '.?'%(&D,' B(!&L %(!&,6' "%>*.)>'%>,'D*BB.&!%!,'' *-'%>6'A:*E!&D,''.?L ;,D%'%*'%>,'A:*D*&'.'' A:,A*&6,:(%,6'D,:%(!&"C'('%*'&.B?,:' (&6'A,:>(A'' ("'*' (''%*' %>,' ()):,)(%,'A*A."(%!*&'C,%'!&' ('),&.!&,"C' >!'>,"",&!D'A!:!%'%>,'%*G&'' *-' :,D,'B*'%' 6!'%!&).!'>,6'?C'B(%,:!('' !BA*:%(&D,'*:'?C'):,(%'B,B*:!,'' G,:,'',%'-:,,

' >!'' !'' '>*G&'(%",('%'-*:'%>,' %!B,'*-' !.''?C'%>,' -:!D(&'!&'D:!AL %!*&' '2'')'E!!!'N[MO'#D*BA' ".L %(:D>' 'R/9' >,'(DD*.&%'' *-' (.%>*:'' ('' %*' %>,'-:,,6'D*BB.&!%!,'')!E,'&*').(:(&%,,'(%(''' -*:' %>,'D*BL A",%,&,''' *-' %>,'"!'%' :*?(?"C' "!'' ("'*'?,"*&),6'%*'%>,B'G>!D>'G('' &*%' (--,D%,6'?C'%>,'D(%(':*A>,'*-' %>,' D>(,(&''(&6',E,&' '.?',I.,&%"C' 6(%,6''%!''' ?C' "CBA!(6''&*%'?C'%>,' ,:(' *-'%>,'A:*E!&D,'H ?,'!6,'' !%'!'' !&D:,6!?",'%>(%'%>,'%*G&'*-'%>,' "CBA!D' -,'%!E('' '>*.'"C'&*%'>(E,'>(6'%>,'?,'%' *-'",)('':!)>%' T' >!'' !'A*!&%,6"C',@A:,'',6'?C' :!'%!6,'' !&' %>,'A(&,)C:!D'*&' *B,' A' RRS' +,??!' !"C$"$' @=' =

, : * "!?L
, : (%!*&' *-'
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>, "('%' , BA, : *:' *-' %>, " (.6!(&' >*.', *&, *-' %>, : (%, *-' 'A*!", 6' A*, %"' (&6' '*' -(:' (%' (""' , E, &%"' (' ?*:&' >!">, "", &, ' G, &%' -.:%>, :' %>(&' .).'%.'' >(6')*&, '!&' %>!"' 6!:, D%!*&' &'): (%!%.6, '-*:' %>, ' :, D*)&!%!*&' G>!D>' >!"' (:%!'%!D' D*&%:!?.%!*&"' >(6' B, %' G!%>' !&' %>, ' &(%!E, ' "(&6' *-' %>, '

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.', ' , :*' "!F, ' !%.' " (B!&!&.' -*:B, :"C' #!!' R1R9K ' (&6' %>(%' *&D, ' B*:, ' !&' *:!&%>' (%' %>, ' '%>B!(&')(B, 'K ' 6, D"(:, 6' %>, ' :, , F" D*"", D%!E, "C' %*' ?, ' :!6' *-' *B(&')*E, :&B, &%' -:, , ' -:*B' %:!?.%, ' (&6' "!F, ' %>, ' %("!(&' ' '.?L ; , D%' %*' &*')*E, :&*:' %' *&D, ' %>, :, ' (:*', ' %>:*.)>*.%' :, , D, ' B*E, B, &%' ' G>!D>' G*."6' >(E, ' ?, , &' D!E!" G(:' ' !-' %>, ', ' A, *A", ' D*."6' >(E, ' (D>!, E, 6' (&C%>!&)' B*:, ' %>(&' ?:(G"!&)H (&6' (-%, :' (' -, G' B*&%>" , 'A('!(&':, J, '%(?"!'>, 6' %>, ' A:*E!&D!(" D*&'%!%.%!*& ' '*' -(:' (" !%" G, &%' G!%>' %>, ' 6:C' :, B(:F' %>(%' %>, ' :, , F" >(6' .&", (:&, 6' %>, ' (:%' *-' ?, !&)' -:, ,

!)>%"' *-'
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>, ' ",)("A*'!%!*&' *-' %>, ' D*BB.&!%!, " ', %' -:, , ' :, L B(!&, 6' !&' '.?'%(&D, ' %>, ' '(B, ' (" .&6, :' %>, ' :, A.?"!D' >, C' :, %(!&, 6' '*' -(:' (" *B(&' ?.:), '', " G, :, ' &*%' !&' I., '%!*&' %>, ' -.""" D*&%:*" *-' ;.'%!D, H *&"C' %>, '), &, :(", &(D%B, &%"' (" %*' (AA, ("" %*' %>, ' , BA, :*:' *&' %>, ' *&, ' >(&6' (&6' %*' %>, ' ', &(%*:!(" (.%>*:!%!, " *&' %>, ' *%>, :' ', , B' %*' >(E, ' ("'*' !&L D".6, 6' %>, ' -:, , ' %*G&' ' ?*E, ' (""' %>, C' :, %(!&, 6' -.""" ', "-J6, %, :B!&(%!*&' (&6' ", "-J(6B!&!'%:(%!*&' %>, &' ' -*:' , @(BA", ' , @, :D!', 6' !&' %>, ' !BA, :!(" A, :!*6' %>, ' :!)>%' *-

YY !G!' -!@ !:, 2⁹ / * ' = ! ' * ' ' ' h4: =; ' ' > ' ' ' # %>, &"' (&6' A(:%(9' YD.J ' ' ' ' ! ' 6 %! !:, '' ' " ' ' YY-% ' ' & ' ' ? $ ' ' ' ' ' 1 !! ' * ' !! ' ! !! ' !:(% , !2*::, ' %' .%'%>, ' , "", &!D' "!%, :(%!' :, B(!&, 6'):(%, -.'' %*' %>, !:' D*"", ().', (&6' A(%:*& ' &' %>, ' A*""*&!.'J:*B(&D, ' #E' S/9' %>, '):, (%' '(), ' -:*B' (AA(6*D!(' :, L -.', '' , 'A('!(&' %>, ' >*&*.:' *-' >!" D*BA(&C' ?, D(.', ' >, ' >(6' B(6, ' %>, ' , "", &, '' '"(E, ' ';.'%' (" %>, ;-' G, :, ' *&' %>, ' A*!&%' *-' ()(!&' 'A, (F!&)' *&!D' *:' *:!D' (&6' G:!%, '' %*' >!B' E(:!*.'' B ' *-' 6, ", D%(?", ' D*(:', &, '' ' B(&' *-' *"*!' G>*' ?:*F, ' >!" &, DF' (&6' %>, &' ?, D(B, ' ("!E, ' ()(!&' (&6' *& %>!" ' *DD('!*&' '(G' ("" %>(%' (&%, ' ?, L >, "6' :, A*:%, 6' %>(%' >, ' >(6' B, %' G!%>' , :*' '' *." ' !&%*' G>!D>' %>, ' , &%' ' *-' %>, ' G*:"6J; .6)B, &%>(6' 6:!E, &'-"(B!&)' &(!" ' (&6' G, :, ' , BA"*C, 6' !&' %.:&!&)' !%' !&%*' ('E!A, :H ?.%' (' >, (E, &"C' E*!D, ' >(6' !&%, :A*', 6' (&6' *:6, :, 6' %>, B' %*' %:(&'-*:B' %>, ' B(&K *&' (DD*.&%' *-' >!" >!">, "", &!' B' G>, &' *&' , (:%>K !&%*' (' ", ' '' :, A."'!E, ' (&!B(" # ".%(:D>' >$' $!' "# ' = "4 ' (%' %>, ' , &69 R %' ", ('%' !&' %>, ' *:6!&(&D, ' *-' (6:!(&' :,)(:6!&)' %>, ' 6, "!E, :!, '' *-' *!" %*' %>, ' D*BB.&!%C' !&D.B?, &%' *&' %>, ' %>, &!(&' "(&6*G&, :" # ' ' ' !!!' /09' %>, ' 6, D!'!*&'G('' !&6, , 6')!E, &' %*' %>, ' +" B' (&6' %>, ' BB $!' ?.% (AA, ("%*' %>, ' , BA, :*:' *:' %>, ' A:*J D*&'.'' G(' (""*G, 6

D*!&(),'G!%>*.% ,E,&' A.%%!&)'%>,' ,BA,:*:'' >,(6' *&' !%''
D*!&''' (&6' ,E,&' *&' A(:%(&' D*!&'' *-' %>,' -!:'% !BA,:!('
A,:!*6' !% !'' -:,I.,&%"C' G(&%!&)' &' %>,&'' ,E,&'%>,' *"6'
:,DF*&!&)'?C'4 !+- !$(&6' 'D*&%!&.,6H *&"C'%>(%'!%'!''
%:.,'%>,'"*D('' %%!D'4 !+- !''*-'%>!''A,:!*6'G('' &*%>!&)'?.%
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f %s%>,sA*A."(:s-,'%!E("'s G>!D>s %>,s -,&D!&)'J!&'%!%.%,s N'=@4" =Fs *-!&s !?,:!.''%!B,s(':!D>sB(&)(E,s(%s C%>,!*&s!&s (D*&!('!%s!'s *:6(!&,6s D:(,A>!('!&s *,*%!('>,s!&E!%,6s%>,s C,(:s%>,s):*G&J.As '"(E,''s (&6s>!'s G!-,s%>,s '"(E,''>*."6s ("'*s A(:%(F,s!&s!%s -,B("s'"(E,''s ('')..'%"("*&)'G!%>s%>,s # ,?('J *.D(:%s &s RSZ(9s !B!"(:s -:,,s'# s s /1RM9s &s(&,&6*GL "(:),'',''s *DD.:s!&s :)*''s # s s B,&%s-*:s%>,s 6!'%:!?.%!*&s*-s*!"s (% //RRs //RZ9

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' &'(&'G,:'%*' *&,'*-'%>,'&.B,:L *."D*BA"(!&%''G!%>'G>!D>'%>,'%*G&" *-' '!(' !&*:' A"().,6' %>,')*E,:&L B,&% *&'(DD*.&% *-' %> !:' 6!'A.%,'' (" %*' %!%",'' (&6' :(&F' !.'' %,"'' %>,' A>,'!(&'' # (66!&)%*&' &4$' A M/9' %>(%',' G(")"(6' %*',(:' %>(%' %>,' ,:)(B,&,'' >(6')!E,&' %*' %>,B' %>,' &,G' %!%","' H %>(%' %>,' BC:&(,(&'' >(6' 6*.?%","'" B,:,"C' ?C' (DD!6,&% *B!%%,6' !%' (&6' G*."6' D,:%(!&"C' !&' -.%.:,' ?,' :,(6C' %*' 6*' G>(%' G(" D*::,D%'!-' %>,C' K %>,' A>,'!(&'K G*."6' (DD*:6' %*' %>,B' %>,!:' :!)>%' %!%","'' *' (' 'B("" CD!(&' %*G&' G>!D>' (AA"!,6' %*' %>,' A:*D*&'." -*:' %>' D*&-!:B(%!*&' *-' (' :,'*"..%!*&'(6*A%,6'?C' %'%>,'"(%%,:',L A"!,6'7 ,&&6*:-')'B +-$' $ $'!'N/9' %>(%',@D,"",&%' *:6!&(&D,'':,I.!:,'*&"C' A:(!',&*%' D*&-!:B(%!*&'H %>,'"(%%,:'!" !BA"!,6' !&' %>,' D(',' >,' :>,%*:!D(" 'D>**"'' *-'%>!'',A*D>'-.:&!'>,6'("'*%>,' 6:(.)>%'B,&'-*:%>,!BA,:!('D>(&D,:CH ?.%'%>!'' ("*&,'B(%%,:,6'"!%%,' %'?,L "*&),6'%*'%>,',',&D,'*-'%>,'A:!&D!A(%,' &*%'%*'(DD,&%.(%,'*.%G(:6"C' %>,'.?L ;,D%'J:,"(%!*&' (&6' ,'A,D!("'C' &*% ()(!&'%>,' :,,F'

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-:, %*G&'3 :,,D,' ,@,BA%,6' -:*B' %>,' :.",' *-' %>,')*E,:&*:' >,' 6,'!)&' *-' -(E*.:!&)' %>,',' D*BB*&G,("%>'KJ?C' -:,,!&)' %>,B' -:*B' %:!?.%,'(&6'",EC' (&6'&*%'",''' ?C' %>,' '"!)>%,'%' A*''!?",':,'%:!D%!*&' *-' %>,' :!)>%'' *-' %>,' '*E,:,!)&' '%(%,K' ",6' (%',('%' !&' B(&C' D(',' %*' %>,' *AA*'!%,' :,'."%' >,' !&%:!&'!D' -("',&,'' *-' %>,' !&'%!%.%!*&'' (E,&),6' !%','-' *' 6*.?%' (B*&)' %>,',''' A:!E!",),6' *:' ?,%%,:' (6B!&!'%,:,6' D*BB.&!%!,'' %>,' D*BB.&("' (.%*&*BC' B(C'>(E,'-."-!"",6' !%'' (!B' H (%',('%' G,' 6*' &*%',(:&' %>(%' A(:%(' *:!&%>' 6B!&!'L %:(%!*&'*-' %>,&' (%:(,'-(:,6' 'A,D!(""C'!"" !&' %>!'' :,'A,D%' .%' %>,&''G('' &*%' B(6,'-*:' ','-J(6B!&!'%:(%!*&' (&6' (--*:6'' %>,' 6!'L >,(:%,&!&)' A!D%.:,' *-' (' D*BB*&G,("%>' A(BA,:,6' ?C' %>,' '.A:,B,' A*G,:' (&6'-!&(&D!(""C' ('' G,"" (' B*:("" C' :.!&,6' C' :!)>%'' !%' *.)>%' %*' >(E,'-*.&6' !%',"-' !&' (' -"*.:!'>!&)

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>,:,':,B(!&,6'%*'>!B'>!'' &(%!E,'"(&6' (&6' !&'!%'' .&!D!A('' D('','%*'?,'(D%!E,'-*:' %>,' D*BB*&'G,('' G('' D,:%(!&"C' (' 6.%C' (&6' (&'>*&*.:' .%' %>,' 6.%!,'' G,:,'E,:C' B*6,'% (&6' %>,'>*&*.:'' B*:,' B*6,'%' '%!"'' T *.:'%('F U' !*'' ('C'' -.:%>,:'%*'>!'' >*6!(&'' T'!'' (' 6!--,:,&%'*&,'-:*B' %>(%' *-' C*.:' (&D,'%*:'' >,C' D*."6'6,E,"*A'%>,!:' (?!"!%C'*&' B(&C' '!6,'' ('A!:,'%*')*E,:&B,&%' (!6'%>,'*AA:,'',6')(!&' (""!,'' -*.&6' D!%!,'' B(F,'G(:' (&6' D*&I.,:H *-' ("" %>!'' C*.' D(&' &*"*&),:'6*'(.)>%' >,:,'!'' ",-%' -*:' C*.'%>,' D*&6.D%' *-' %>,'>*.',>*"6'%>,' (6B!&!'%:(%!*&' *-'%>,' D!%C' %>,'?,'%*G(" *-'>*&*.:'' (&6' 6!'%!&D%!*&'' G!%>' D>*!D,' (&6' B*6,:(%!*&' (' ',(% !&' D*.&D!" (&6' !&' D*.:%' '(D:!-!D,' %*' %>,')*6'' (&6' D,",?:(%!*&' *-' -,'%!E("'' H !&' ("" %>!'' C*.' B(C' 6!'%!&).!'>' C*.:',"E,'' (?*E,' *%>,:' %*G&'' *:' (:,' %>,',' '"!)>%' B(%%,:'H %>,' 6,D*:*.'' ?,(:!&)' %>,' D(:,' -*:' %>,'>(!:' (&6' ?,(:6' %>,'',6(%,'A(D,' !&' %>,' '%:,,%' '*' %>(%' %>,' -*:,!)&,:'' (DD.'%*B,6'%*' *%>,:' %>!&)'' B(C'?C'C*.:'!6,' .&",(:&' %>,!:' >('%,' %>,' ?,D*B!&)' 6:,'' ',E,&' %>*.)>' !%' B(C' ',,B' :!6!D."*.'' %>,' &(::*G'(&6' &,(%' A.:A",J?*:6,:' %>,' D("BL &,'' !&' %>,' %>,(%:,' %>,' B*6,:(%!*&' !&' (AA"(.',K ("" %>!'' -*:B'' %>,' >*&*.:' *-' C*.:' %*G&'H %>,:,!&' B*:,' %>(&' !&' C*.:' A*:%'' (&6' G(""'' (&6' 6*DF'' (AA,(:'' %>,')**6' *"6' ,"",&!D' >(?!%H (&6' %>,:,?C' ,E,&' %>,' ?(:?(:!(&' G>*' F&*G'' &*% %>,' &(B,' *-' %>,' D!%C' A,:D,!E,'' %>(%' >,' !'' !&' :,,D,' (&6' &*% !&' C:!(' *:' !"!D!(U' "" %>!'' G('' %*'%>,' A*!&%< ?.%'!-'!% G('' &*' "*&),:' :,I.!:,6' &*G' *-' %>,' D!%!Q,&

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%*'6!,'-*:'%>,'D!%C'*-'>!''-(%>,:''%>,'I.,'%!*&'G('' (%'(&C':(%,' &*%'G!%>*.%'G(::(&%'G>,%>,.':!%'G('''%!''''G*:%>'%>,'%:*.?",' %*' "!E,'-*:'%>(%' D!%C' >,:,' ,@!'%''' (' 6!'I.!'!%!*&' ?C' ".%(:D>' ('' %*'%>,'A*'!%!*&'*-'%>,' :,,F' B.&!D!A('' *--!D!('' !&' >!''%!B,'G>,:,!&' >,'6!'D.'',''%>,',':,"(%!*&''G!%>'%>,' -(!:&,''' (&6' D!:D.B'A,D%!*&'D>(:(D%,:!'%!D' *-' >!B' >,' *"6' 6!--!D."%C'*-'D*&6.D%!&)' %>,')**6' (6B!&!'%:(%!*&'*-' A.?"!D' (--(!:'' ?C' B,(&'' *-' B(;*:!%!,'' *-'' %>,'D!%!Q,&'K .&L D,:%(!&'D(A:!D!*.'' *-%,&' ?,%>!&F!&)' %>,B' B*:,' *-'' %>,!:' *G&' (6E(&%(),' %>(&' *-' %>(%' *-' %>,' D*B B*&G,("%>K *:' ,E,&' *-' %>,'E,:C'&.B,:*.'' D*.&D!"J?*(:6 K %>,' %>,&!(&' &.B?,:,6' !&' %>,' !BA,:!('' A,:!*6' -!:'%' 1[[' %>,&' N[[' "(%,:' NM[' %*G&JD*.&D!"":'K '.?'!'%,6' &*G' (''-*:B,:"CP' !%' !'' %>,'6.%C'*-'%>,'D(A(?",' B()!'%:(%,' %*' A:,E,&%' %>,' :'A,*A",'U' -:*B' !&-"!D%!&)' G:*&)' *&' %>,'!&6!E!6.('' ?.:),'' -:*B' (AA:*A:!(%!&)' %*' %>,B','E,'' .&(""*G(?"C'A:!E(%,'A:*L A,:%C'-:*B'6!'%:!?.%!&)' (B*&)' %>,B' %>,' B.&!D!A('' A:*A,:%C' K %('F'' G>!D>' (:,' &*%' :,&6,:,6' %>,' ,('!,:'?C'%>,'-(D%' %>(%' %>,' B()!'%:(%,' >('' &*' B,(&''-*:'%>,' A.:A*','?.%';.6!D!*.'' (6B*&!%!*&' (&6' %>,' (:%' *-' %>,' 6,B()*).,' %>(%' !%' !'' -.:%>,:' '.)),'%,6' %*' >!B' &*%' %*' ?,' %**' A.&D%!"!*.'' !& '.D>' %>!&)'' (&6' !-' (%' (' D!%C'-,'%!E('' (' B*6,:(%,' "(:),'' %*' %>,' ?.:),'','' !'' A:*A*',6' &*%' %*' 'A*!'' B(%%,:'' G!%>'%>,' A,*A",' *&' (DD*.&%' *-' '.D>' (' %:!-",' .%' !&' *%>,:' :,'A,D%'' %>,' D!:D.B'%(&D,'' >(6' ,&%!:,"C'D>(&),6' (&6' %>,' *--!D!('' B.'%'",(:&' %*' (6(A%' >!B','-' %*' %>!&)'' (''%>,C' (:,' !:'% *-' (''' >,' >('' %*' F,,A' %>,' A*G,:','&,''' *-' %>,' ,"",&,'' A:,',&%' (%' ,E,:C' B*B,&%' %*' >!B','-' (&6' %*' >!'' -,""*GJ' D!%!Q,&' >,' -:,,6*B' *-' %>,' D*B B.&!%C':,(D>,'' '*' -(:' (''%>,' :.",:'' (""*G' !%' (&6' (&C%>!&)' B*:,'G*."6' 6*.?%','' ?,' ,E!'' >,&' ,:!D","' A.%' *&' %>,' :*?,'' *-' *--!D,' >,' D("",6' %*' >!B','-' &*%' %*' -*:),%' %>(%' >,' G('' :."!&)' *E,:' -:,,' B,&' (&6' :,,F'' H %*J6(C' %>,' B()!'%:(%,' >('' %*' '(C' %*' >!B','-'%>(%' >,' :.","' .&6,:' (' :.",:' *E,:' (' %*G&' '.?;,D%' %*' A:*D*&'.''' (&6' !BA,:!('' A:*D.:(%*:'' %>(%' >,' D(&' (&6' B(C'?,' &*%>!&)' ?.%' %>,' *:)(&' *-' %>,')*E,:&B,&%' %>(%' ('%:*F,'*-' %>,')*E,:&*:' A,&' '.--!D,'' %*' (&&.'' (&C'*&,' *-' >!'' 6,D:,,'' >,:,-*:,' !%' !'' %>,'-!:'%6.%C'*-' (')**6' B()!'%:(%,'%*' A"(D,' >!B','-' *&' (')**6' .&6,:'%(&6!&)' G!%>

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D,:%(!&"C (B*&)%>, B*'%A,:&!D!*.''*-%>, B(C'*:, ,E!"'
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A,*A", *- %>,   ,"",&,''Ĥ %>,),&,:( )CB&('%!D -,'%!E(*- %>,   :,,F %:!?,' (&6Ć%*G&'' (H&6́ %>, D>(A",% A"(!%,6 -:*B %>, "9:(&D>,' *-Ĥ %>, *"!E, -*- %>6 (?",'%:..&&,- (DL D*:6!&) %* %>, 6,D!'!*& *- %>, T ,""('J;.6) 'U ,:, %>, !&&*D,&% (&6 '!BA", ,@A:,''!*& *- %>, C*.&)&(%!*& ((D*"",D%!E, .&!%C .% %>,!:A*"!%!D(6,E,"*AB,&%>(6 '**& D(::!,6 %>,B ?,C*&6 %>!' ,(:"C 6(G& ":,(6C !& %>, 6(C' *- %>, %>,&!(& &(E(",()., *: (% ",('% *- %>, B*&(:D>C*- ",@(&6,: %>(%-,'%!E(*- %>, ,"",&,' G((& (&(D>:*&!'B (D>!"6' A"(C D*&%!&.,6 !& %>, (), *- B(&>**6Ĥ %>,-(D% %>(% %>, A*'',''*: *- %>(% *"!E,G:,(% A('',6 (% ",('% G!%> >!B',"- (&6 >!' -,""*GJD!%!Q,& (>*"6,: *- %>, &(%!*&(A:!B(DC >(6 &,(:"C (B.D '!)&!L -!D(&D, (!- !& &)"(&6 %>, E!D%*: !& %>, '%.6,&% ?*(% :(D, G,:, %* ?, A"(D,6 *& (",E, G!%> !%% (&6 ,(D*&'J -!,"6 >, ,@%,&'!*&*- %>, ,"",&!D &(%!*& ?C D*"*&!'!&) (&6 ,"",&!'!&)-*.&6 (B!6'% !% !6,(.&!%C (&6 :,(6!'L :.A%!*& !% %:., ,@A:,''!*& !& %>!' 6:,(BC :,("B *- %>, *"!E,JG:,(% Ĥ (&6 %>, :,,F :,(A*"!DC *- %>, %!B, *- %>, !(6*D>! %>,:,.A*&)(E, !%',"- (G(B,,% ?.% "!%%", %:*.?", *& %>, '.?;,D% .% G>,& %>, !BA,:!(A,:!*6 (-%,: !% -('>!*& %**F A %>, (&>,"",&!D !6,((&6 %>, *B(& ,&%,:,6 !&%* %>, :!)>% (&6 6.%!, *- %>, ,"",&,' %>,& "CBA!(' :,B(!&,6 *: ?,D(B, %>,%:., 'CB?* -*: %>, *B(&T ""J ,""('UĤ (%(&C:(%, %>, -!:'% *B(& "CBA!D E!D%*:(AA,(: .&6,: .).'%.' (&6 !& %>, A,:'*&*-&*",' %>(& .).'%.' '%,A'*& %>, '.?',I.,&%,BA,:*: !?,:!.'3 >, -(: -:*B A.:, B(::!(),J(""!(&D, G>!D> "">,"",&!'B ,&%,:,6 !&%* G!%> %>, 6,B*& *- A"(C D*&E,:%,6 %>,', -,'%!E(" !&%* (& !&'%!%.%!*& (A*G,:-. (&6 "('%!&) (!% G('!&;.:!*. ! !&),&,:(" (&6 ,'A,D!(""C -*: ,""(' >, G>*", ,"",&!D (&6 ,"",&!'!&) G*:"6 %**F A(:% %>,:,!&

  >,'-!:'% *B(& "CBA!*&!D%,' *- G>*B G,'F&*G !' ! "(.6!.' ! - ,:* ?,C*&6 6*.?% %>,'.?L ',I.,&% ,BA,:*: G!%> %>, 6,B*& *- A"(C D*&E,:%,6 %>,', -,'%!E(" !&%* (& !&'%!%.%!*& (A +- ,$& /OO[A MZ9Ĥ %>!' E!D%*:C -("" A:*?(?"C !& " /OM # !9 &*%!& :$& 6 3;9,((" %>, "!'% *- -:!D(&I '%(%,' # .',? ! A R/S D>?&,9 & %>!'C,(: %>, D*&I.,:*: G(' :(%>,: >!' '*& ,:B(&!D.' "!F,G!,' G!%> %>, -*.:J !&J>(&6 A +- ,$& /ONO A Z19 B*&)%>,',A*&CB*.' "CBA!*&!D(, %>,'E!D%*:' !& %>,'%(6!.B &* *B(& !'-*.&6Ĥ %>!'G*.&6!&)*-%>, :,,F &(%!*&(-,"!&)',,B %* >(E, ?,,& (E*!6,6

',&6!&)'6,A.%!,'%*'%>,B' (&6' !B!%(%!&)'%>,B'H ,E,:CG>,:,'
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>E>(% !& %>,' '%:!D% ',&',' G,:,'%>,'%>!&)'' D*&%,&6,6'-*:
*% B,:,"C' 6!6' %>,' *B(&')*E,:&B,&% (""*G' -:,' &!E,:'' '
'D*A,'%*'%>!'' :!E(":C' !&')CB&('%!D' (&6' *%>,:' D*BA,%!%!*&'' +>"&!:3 i'
?.%'%>,' ,BA!:,'%**F' A(:%'!&'%>,B'H %>,'' :!)>%'' '*",B&"C' %*'
-,%D>' >*B,' %>,' E!D%*:' %*' >!'' &(%!E,' D!%C' 6!6' &*% !&'
%>,' !BA,:!(" A,:!*6' 6,A,&6' *&' %>,' A",('.:,' *-'%>,'?.:L
),'',' D*&D,:&,6' ?.% G(' D*&-,::,6' *&' %>,' !&6!E!6.("
()*&!'%!D' !&'%!%.%,' ?C' !BA,:!(" D>(:%,: ' (&6' !&' %>!'' D(',
("'*' %>,' C,(:"C' A,&'!*&' N!.) FM F' (''!)&,6' %*' %>,' E!D%*:'
G(' D>(:),6' .A*&' %>,' !BA,:!(" ,@D>,I.,:' (&6' %>,' B*:,'
!BA*:%(&% ()*&!'%!D' !&'%!%.%,' G,:,' %:,(%,6' 6!:,D%"C' ('
!BA,:!(" !&'%!%.%!*&'' >!'' !:'%,:,'%'!&')(B,'' ',!Q,6' ("" %>,'
A:*E!&D,' (' G,"" (' %>,' ,BA!:,'!%',"-H ?.% :,,D,' A:*A,:'
G(' ("G(C' %>,'!6,(" D,&%:,'*-' '.D>' D*&%,'%'' (&6'E!D%*:!,'
,:,' G(' %>,!:' >*B,' *&' %>,' "A>,.'H >,:,'%>,' ',(% *-'
%>,' *"6,'% !B!%(%!*&'' *-' %>,' C%>!(' '%>B!(' (&6' ,B,('
'%!"" ?,"*&)!&)' %*' %>,'):,(% %!B,' *-' %>,' ,"",&!D' &(B,'
(&6')"*:!-!,6'?C' !%'' D"(''!D' A*,%'' (&6'&*" ,'' *-' (' &.B?,:'
-' B:,' :,D,&% ?.% :!D>"C' ,I.!AA,6' '!B!"(:'-,'%!E("'' %>,'
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-*.&6,6' .&6,:' .).'%.'' %>,' %>,&!(&' (&(%>,&(,('%>,'
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-!D,&D,' (&6' "!F,G!',' D,",?:(%,6' (% %>,&'' % B!)>%'
?,' B(%%,:'-*:'G*&6,:'%>(% %>,'G>*",'G*:"6' *-'%>,' G!6,'
,BA!:,'','B,6'%*':,E*"E,':*.&6' %>,',')CB&('%!D'-,'%!E("'
?.%'&*% %>(% %>,' ,"",&,'' (?*E,'("")*% !&%*@!D(%,6'*E,:'
%>!'' :(:,'D.A'*-',&D>(&%B,&%' (&6' %>(% %>,'"!-,'*-'A*"!%!D("
I.!,%'G>!D>' %>,!:'?,'% B,&':,D*BB,&6,6'%*' %>,B'G('' !&

' &'()*&!'%!D'!&'%!%.%,'%>.'' A:!E!L ",),6'!'' %,:B,6'6E!!!'h,#81'' +$ &! $"' !+ # '#%>(%!'' !%>'A,&'!*&!&)# !*' "!' /9'*:' ? =' $!$!!" & '+$ &! $"' 4! &+# '#D*BA'(B*&)'*%>,:'' "!&' !4' ! ' //0' //O' '2')'@' M/M9

>,' YC'%(:D>!(' %*'*' !'' (%' ",('% !&' D,:%(!&' D('','' D*&-,::,6' ?C' %>,' ,BL A,:*:' # !%%,&?,:),:' $ $ ' @!!' /N' -9' *% G!%>*.% G(::(&% %>,',' !&L '%!%.%,'' D("",6' %>,B','E,'' T'G*:"6J)(B,''O' =7&$= F

/O

%>,' B*'%' !&;.:!*.'' G(C' 6!'%.:?,6' ?C' %>,' G:,(%>'' (&6' %>,' '%(%.,'' (&6' %>,' A:!E!",),'' *-' %>,' -,'%('' E!D%*:'

.&!D!A(" (B?!%!*&

!E!D' !&'%!%.%!*&'' %**F' (' '!B!"(:' D*.:',' D,:%(!&"C' !& %>,' ,BA!:,' (' (' G>*",' ?.%' ()(!&' B*:,' ,'A,D!(""C' !&' ,""('' >,&'):,(%' (!B '' (&6' (&' (B?!%!*&' '%!"" ,@!'%,6' %>,:,' !& ,""(' ';.'%' ('' !&' *B,' %>,' A.:'.!%' *-' A.?"!D' *--!D,'' (&6' A.?"!D' >*&*.:'' >(6' -*:B,6' %>,' D,&%:,' *-' A*"!%!D('' ,B."(L %!*&' (&6' >(6' D("",6' -*:%>' ("*&)'G!%>' B.D>' %>(%'G(' ,BA%C' :!6!D."*.'' B!'D>!,E*.'' ("'*%>,' (?","'%' (&6' &*?","'%' ',:E!D,'' *G' %>,' F,:&,'' >(6' E(&!'>,6' (&6' %>,' >.'F' :,B(!&,6h' !&' (&*A,.'' !&' %>,' >*D!(&' %,::!%*:C' %>,' >*.','' G,:,' :**-","'' (&6' %>,' D!%!Q,&'' 6G,"%' !&' >.%'' ?.%' !%' G(' '%!"" (' D!%C' !&6,,6' (' '%(%,' (&6' !&' %>,' A:*D,''!*&' *-' %>,' >*D!(&' D*B B.&!%!,'' %>,' (&*A,(&'' G,:,' &*%' G(&%!&)' >,',' %*G&'' G!%>' %>,!:' B()!'%:(D!,'' (&6' A:!,'%>**6'' G!%>' %>,!:' "(!"6(%*:C' 6,D:,,'' A:*D"(!B,6' ?C' >,:("6' (&6' %>,!:' ',(%'' *-' >*&*.:' !&' %>,' A.?"!D' (''B?"!,'' G!%>' %>,' A.:A",' 6:,'' (&6' %>,' 6!(6,B' G!%>' '%(%.,'' *&' -**%' (&6' *&' >*:',?(DF' 6:*E,' (' %:(6,' !&' E(&!%C' (&6' A!*&,CJ;*??!&)' G*:','' %>(& %>,' A,%%!,'%' A("%:C' A:!&D,' *-' B*6,:&' %!B,'' G6%>' >!'' *:6,:'' (&6' %!%","'' >,:,' G*."6' &*%' ?,' G(&%!&)' ,E,&' (B!6'%' %>,','' !&D!6,&%'' :6(' B,:!%' (&6' >*&*.:(?",'):(%!%.6,' H ?.%'),&,L :(""C' !%' G('' (' %:(6,' *-')!E!&)' (&6' %(F!&)' *:' %*' .','' ".%(:D> '' "(&).(),' (&' (--(!:' ('' ?,%G,,&' (' D*.:%,'(&' (&6' >,:' D.'%*B,:'' '' (%' %>,' A:,',&% 6(C' A:!E(%,' B.&!-!D,&D,' !&' %>,' A*'!%!E,' 6,),:,' A:*D.:,'' (&' *:6,:' !&' %>,'' '.A,:"(L %!E,' (' A(%,&%' *-' &*?!"!%C' '*' !%' %>,&' A:*D.:,6' %>,' A:!,'%"C' A.:A",' (&6' %>,' '%(%.,' !&' %>,' B(:F,%' A"(D,' H (&6' !%' !'' &*% G!%>' !BA.&!%C' %>(%' %>,' '%(%,' !'''.,'' (' 'A.:!*.'' D*!&(),' *-' !%'' >*&*.:'

%'' >*&*.:'' (&6' %>,!:' ,E!"'

'' :,)(:6'' %>,' 'D(",' *-' D*&6.D%!&)' '.D>' A:*D,,6!&)'' (&6' %>,'):*''&,'' *-' %>,!:' -*:B'' %>,' 6*!&)'' *-' %>,' A:,',&% 6(C' -("" D*&'!6,:(?"C' ?,>!&6' %>*',' *-' %>,' (&D!,&% G*:"6' (' !' &(%.:(" ',!&)' %>(% %>,' (AA(:,&% (.%*&*BC' *-' %>,' D*BB.&!%C' &*%' '.--!D!,&%"C' D>('%,&,6' ?C %>,' !6,(' *-' %>,' '%(%,' ?*:,' .&>!&6,:,6' 'G(C' !&' %>!'' 6*B(!&' (&6' %>,' 6,L D:,,!&)' (.%>*:!%!,'' %>:*.)>*.%' G,:,' %>,' ?.:),'',' *:' %>,' D*.&D!"'' *-' A,%%C' %*G&'' >,' D*&',I.,&D,'' G,:,' A,:&!D!*.'' *&' ?*%>' '!6,'H %>,' B.&!D!A(" *--!D,'' G,:,')!E,&' (G(C

B*:, (DD*:6!&) %* %>, (?!"!%C %* A(C %>(& (DD*:6!&) %* %>, (A%!%.6, *-%>, D(&6!6(%, 'H %>, ?(&I.,% ' (&6 "(:), '', B(6, %>, :,D!A!,&%" &*&, %>, :!D>,: (&6 *-%,& !BA*E,:!'>,6 %>, 6*&*:H %* %>, !&D:,(',6 (E,:'!*& -*: "(?*.: (&6 %>, 6,D(C !& %>, B,(& *-)**6 -(B!"!, %>! ,E! >(?!% D*&%:!?.%,6 !% -." '>(:, >, ,D*&*BC *-%>, D*BB.&!L %!, %>,B',"E, ("'* '.--,:,6',E,:,"C .&6,: %>, 'A:,(6!&) ,E! *-(6."(%!*& * 6*.?% %>, >*&*.: G!%> G>!D> %>, D*BB.&!%C %>(&F,6 %>, !&6!E!6.(?,&,-(D%*: G,:, VB,('.:,6 !&):,(% A(:% ?C %>, '(B, :(%!*&(A:!&D!A", *-(!:&,' G>!D>)*E,:&' (% %>, A:,',&% 6(C '!B!"(:6,L D*:(%!E, -(E*.:'H (&6 G>,& %>(% G(&*% %>, D(', %>, ?,&,-(D%*: -:,I.,&%"C -*.&6 >!B',"- :,(6C -*: ,@(BA", A,:'*&(""C %* A(C -*: %>, '%(%., %* ?, ,:,D%,6 !& >! >*&*.: .% %>, '(B, 6!6 &*% (AA"C %* %>, B(:F *- >*&*.: G>!D> %>, D*BB.&!%C '>*G,6 %* -*:,!)&,: *- :(&F (?*E, (" %* %>,)*E,:&*: (&6 %>, ,BA,:*:' (&6 %* %>, B,B?,: *- %>, !BA,:!(>*.', >, %,&6,&DC *- %>, %!B, %* ',% E("., ,E,& *& B,(&!&)",' (&6 -*:B(>*B(), 6!6 &*% 6*B!&(%, %>, !BA,:!(D*.:% (&6 %>, *B(& ',&(%*: '* B.D> (%>, D!:D", *-(B?!%!*& !& %>, A,%%C %*G& ?.% C,% !% 6!6 '* !& (E,:C A,:D,A%!?", G(CH (&6 ((B(%%,: *- D*.:', %>, >*&*.: (&6 %>, >*B(),):,G G!%>(!& %>, D*.:', *- %!B, %>*:.)> %>, .', %* G>!D> %>,C G,:, A.% (&6 -.:%>,: !& %>, '(B, A:*A*:%!*& (%>, G*:%",''&,' *- %>, A,:'*&(),)*E,:&!&) *:%(F!&) A(:% !& %>,)*E,:&B,&% & %>! :,'A,D% (B!)>% ?, D*&D,!E,6 %>, *--,: *- >*&*.: G(("G(C '%:*&),: %>(& %>, 6,B(&6 -*: %>,B (&6 %>*', G>* :!)>%"C E(".,6 '.D> B(:F *- >*B(), !& *:6,: %* :,B(!& 'A(:,6 -:*B !% G,:, D*BA,"",6 %* 6,D"!&, %>,B G>!D> ',,B %* >(E, ?,,& 6*&, *-%,& ,&*.)> !& !&6!E!6.(D(', ?.% ',"6*B G!%> D*&'!'%,&DCK -*: !?,:!. ' %>, 'B(" &.B?,:

/ >, ,BA,:*: (!."6,D"!&,' !& >! ",%%,: %* %>, 6!,% *- D>(!(%>, T):,(%&.B?,:U *- '%(%.," (6;.6),6 %* >!B (&6 D*&%,&%" >!B',"- G!%> %>, -*.: *- "CBA!(,B,(,"A>! (&6 %>, '%>B."# ,!" " + $ & & Z/9 >, '(B, 6!,% :,'*"E," %* ',% .A (' '%(%., %* %>, ,BA,:*: (6:!(& !& ,(D> *- !% %*G&' *- G>!D> %>, ?(' *- %>(% ',% .A (% ?,(!& ,'',&!(>(' ?,,& A:,L ',:E,6 # 2 /Z[N9 BA,:!((.%>*:!'(%!*& -*: .D> ,:,D%!*& G(:,I.!:,6 -:*B %>, -!:%

-'%(%.,',:,D%,6%>!B B(C A,:>(A'?,':,D*:6,6(B*&)'>!'%!%",'%*>*&*.:' >,'6!'?.:',B,&%'-*:'>*&*:(:C B,B*:!("'G>!D>'*-%,&G,&%-(:'?,C*&6'%>,''!BA",'%(%.,'(&6'-*:'>*&*:(:C,B?(''!,' G,:,'(D(&D,:'(&6'?,D(B,',E,:' B*:,'*' !&%>,' B.&!D!A(",D*&*BC*-'("">,'A:*LE!&D,' .%&*&,'A,:>(A'',@A,&6,6' .',",''"C'.B'*"(:),'!&'A:*A*:%!*&%*' !%'''",&6,:'(?!"!%C%*'-.:&!'>'%>,B'('%>,'A:*E!&D,'*-' ,""('%>,' B*%>,:"(&6'*-'B.&!D!A(">*&*.:'('*-':,G(:6'-*:'%>,'-,'%("E!D%*:'(&6'.&,@D,"",6'(%'%>!'A,:!*6'!&'*&,'A:,J,B!&,&D,K %>(%'*-'B,&!(">.B!"!%C(&6'(?;,D%'>*B(),

:(6,'(&6'!&%,:D*.:',

>(%'%>,',D*&*B!D'D!:D.B'%(&D,'*-' :,,D,'G,:,'&*%-(E*.:(?","'D(:D,'&,,6'*'?,'A,D!(""C','%'-*:%>'!&'6,%(!"'>,'"(&6'%(F,&'*&'%>,'G>*",'G('?.%'*-'B*6,:(%,'-,:%!"!%C'%>,'():!D."%.:('A*:%!*&'*-'"!B!%,6',@%,&%'%>,'D."%.:,'*-'%>,'E!&,'*&'%>,'B(!&"(&6'&*%'*-'A:*B!&,&%!BLA*:%(&D,'%>(%'*-'%>,'*"!E,'B*:,'*' '%>,'I.(::!,'*-'%>,'-(B*.'B(:?",K %>,'>!&!&)'G>!%,' %%!D'(&6'%>,'):,,&(:C'%!(&K?,"*&),6'"!F,'B*'%*%>,:'%*'%>,'6*B(&!("A*'',''!*&'%>,'G*:F!&)'*-'%>,B'?C'!BA,:!(''"(E,'%,&6,6'"!%%",'%*'?,&,-!%'%>,'A*A."(%!*&

>,'B*'%('''!6.*.''*-'%>,' :,,F'6!'%:!D%''-:*B'(&!&L6.'%:!("A*!&%*-'E!,G'G('%>(%'*-'%>,' D>(,(&''G>,:,'%>,'B(&.-(D%.:,'*-'G**"",&'%.--''%>(%'>(6'"*&)',@!'%,6'B(!&L%(!&,6'!%'):*.&6'(&6'!&'%>,'G,"",JA,*A",6'%*G&'*-' (%:(,'&.B,:*.''**B'G*:F,6'.A'%>,'-!&,'-"(@'*-' "!''!&%*D"*%>!&)'(&6'>,(6J6:,'',''' :%'(&6'(:%J>(&6!G*:F'%!""D*&%!&.,6'D>!,-"C'!&'%>,'>(&6''*-'%>,' :,,F'H (&6'*-'%>,'B('',''!&'A(:%!D."(:'*-' ,&%,"!D'B(:?",'G>!D>'%>,'!BA,:!("A,:!*6'B(6,' .','*-'&*''B(""A*:%!*&'B.'%'>(E,'?,,&'G*:F,6'.A'*&'%>,' 'A*%' .%'!%'G('A:,6*B!&(&%"C(?:*(6'%>(%'%>,' :,,F' A:(D%!',6'?*%>H *-'%>,',@A*:%'*-' :,,F'(:%JA:*6.D%''-*:B,:"C''*' !BA*:%(&%'%>,:,'!''"!%%",'B,&%!*&'(%'%>!'A,:!*6' >,'D!%C'*-'%>,'%G*'',('*:!&%>

'%'%>,':,E!'!*&'*-'%>,'%*G&J(DLD*.&%''*-' CQ(&%!.B '"!&C'-*.&6'%>(%'(&&.(""C'/R[[['','%,:D,''# f/RM9'G,:,'',%6*G&'-*:'%>,'D*&E,C(&D,'*-'&,GJC,(:'')**6'G!'>,''?C'('A,D!("6,A.%(%!*&'%*'%>,',BA,:*:'(&6'Z[[[

','%,:D,''# fZR9'-*:'%>,''(B,'%*'%>,')*E,:&*:'*-' *,'!(' "!&C'!&'%:.D%"%>(%'(&&.(""C'/R[[['','%,:D,''# f/RM9'%>,'(.%>*:!%!,''%*''&6'%>,',''D*&L):(%."(%!*&''%>,&D,-*:%>'*&"C'!&'G:!%L!&)'G>!D>' :(;(&'(AA:*E,''A*'!4'! 'SZ'SS9

K %>,' B,%:*A*"!'' D*B B*&' %*' ("" ,"",&,' ' D*&'%(&%"CJ' 'G(:B!&)' G!%>' -*:,!)&,:' ' (' (' :>,%*:!D!(&' 6,'D:!?,'' !%K ' >(6' %>,' B*'% '%!::!&)' %:(--!D' &' %>,' %G*' *B(&' D*"*&!,'' *-' *:!&%>' (&6' (%:(,' (&6' B*:,*E,:' !&' %>,&'' D*&'%(&%"C' -!"",6' ?C' '%:(&),:'' ',,!&)' (&6' ",(:&!&) ' G(' D*&D,&%:(%,6' %>,' "(:),:' ?(&F!&)J?.'!&,'' *-' %>,' A:*E!&D,' G>!D>' !&' %>,' !BA,:!('' A,:!*6' (' !&' %>,' :,A.?"!D(&' "(C' "(:),"C' !&' %>,' >(&6'' *-' %("!(&'' ',%%",6' %>,:,' &' A"(D,'' %**' *-' %>,' ',D*&6' :(&F' (' !&' :)*' ' "!' ' (&%!&,(' !&' %>,' ,"*A*&L &,'.' ' %>,' *B(&' B,:D>(&%'' G>*' G,:,' ',%%",6' -*:B,6' '*D!,%!,'' *-' %>,!:' *G&' '%(&6!&)' ("*&)'!6,' *-' %>,' ?.:),'',' ' &'),&,:('' %:(6,' (&6' D*B%&,:D,' G,:,' (%' (' "*G' ,??' !& D>(!(' A(:%!D."(:"C' '!&D,' >*6,'' (&6' ,"*'' >(6' D,(',6' %*' ?,' ,BA*:!(' -*:' %>,' D(::C!&)' %:(--!D' ?,%G,,&' '!(' (&6' .:*A,' (&6' %>,' "(%%,:' >(6' ?,,&' 6:(G&' %*' %("C' !:(DC' G(' :,'%:(!&,6' (&6' ,E,&' %>,' "(&6J:*.%,'' G,:,' %*",:(?"C' ',D.:, H' ?.% G!%>('' %>,' *"6' >(AAC' %!B,'' 6!6' &*%' :,%.:&' >,' 6,'*"(%!*&' *-' %>,' !:(,.'' >(' ?,,&' (":,(6C' B,&%!*&,6' H !%' G(" (&' ,E,&%' G>,&' *&,' *-' %>,'):,(%')CA%!(&' D*:&' '>!A'' *&D,' '%:(C,6' %>!%>,:' (.A"!(' %>,' A*:%' *-' :)*' ' %>,' B*'% D*&'!6,:(?"," D*('% %*G&' *-' %>,' ,"*A*&&,'.'' (-%,:' (%:(,' "(C' "!F,G!',' 6,'*"(%,

' >(% %>,' "(&6J:*.%,'' *-' :,,D,' G,:,' 'A,D!("C' .&'(-,' G,' 6*' &*% ",(:&M (' %*' G>(% G(' %>,' &(%.:,' *-' %>,' !&'.::,D%!*&' !&' D>(!(' .&6,:' !.'' N;&!' M' S9' G,' (:,' I.!%,' !&' %>,' 6(:F' -' %>,' :*??,:JD>!,-'),&,:L ("CK (&6&*%A:.,D!','C' %>,' :,,F'*&,' KA"(C'' (' A:*B!&,&% A(:% !&' %>,' "!)>% "!%,:(%.:,' *-' %>,' ,A*D>' %>!'' E,>!D"," !'' D*BB*&' %*' %>,' ?(6' :*B(&D,JG:!%,:' *-' ("" (),'' >,' .?*,(&' 6,',:% *-' %>,' B*:,' A*"!'>,6' !*' G(''&*% (' :*??,:'' &,'% ?.% !% G(" %>,' G:,DF' *-' ('):,(% "(&6,6' ,'%(%,' G>*','A*'L ,''*:' >(6' ?,,&' D*&6,B&,6' *&' (DL D*.&% *-' >!'' ,(%>' ?C' %>,' ,BA,:*:' (&6' G>!D>' %>,&D,-*:%>' "(C' G('%,' *:,*E,:' !%' !'' >,:,' (AA(:,&%K (" !&L 6,,6' &,,6'' &*' A:**-' (% ",('% -*:' %>*',' G>*' (:,' &A&J'D>*"(:'K %>(% %>!'' >!'%*:C' !'' ;.'% ('%:.,' (" B*'% G>!D>' ?,)!&' ?C' '%(%!&)' %>(% %>,' &(::(%*:' >!B','-' >(6' !% -:*B' %>,' A,:'*&' D*&L D,:&,6' H !-' %>,' D*&-!'D(%!*&' G,:,' >!'L %*:!D("' %>,' A*'',''!*&' G*."6' >(E,' D*B,' %*' %>,' ,@D>,I.,:' &*% %*' %>, %*G&' G>!D>' %>,' &(::(%*:' (DD*:6!&)"C' %(F,'')**6' D(:,'&*% %*'&(B, R >,' &(!E,'6,'D:!A%!*&' -' D>(!(' ?C' (&')CA%!(&' B,:D>(&% *-' *&J' '%(&%!.' '' %!B,' B(C' -!&6' ('A"(D,'>,:,' K T' >,' "(&6' *-' D>(!(' :,,D,' (&6' (D*&!(' >(' B.D>' *-' ",(:&!&) ' ?.% !'' !&(6,I.(%,' -*:' *%>,:' %>!&)'' &,,6-."H -*:' !%' !'' (' 'B("" (&6' B*.&%(!&*.' A:*JE!&D,' (&6' D(&&*% -.:&!'>' B.D>' D*:&' ?.% A:*6.D,'' '*B,' *!" (&6' %>,' %%!D' >*&,C' (&6' D(&' ?,' A:(!',6' B*%,' *&' (DD*.&% *-' %>,' 'D>**"'' (&6' ,"*L I.,&D,' ?.% &*% '*' !&' B*'% *%>,:' :,'A,D%'' -' %*G&'' !% >('' *:!&%>' (&6' %>,&' *:!&%>'>(' B.D>' D*B L B,:D,' (&6' (' -!&,' ?.!"6!&)' %>,' (B L A>!%>,(%:,'H ?.% %>,&'>('' *"6',--!)!,' U-& !'!"&6& ! F' (&6' ('G*:F' G*:%>' B,&%!*&!&)' %>,' D!%(6,"' G>,:,' B(&C' '%(%.,'' '%(&6' (&6' G*&6,:-."C' ',% -*:%>' %>,' G(:J6,,6'' *-' %>,' -*:,-(%>,:'

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%! '! !& (DD*:6(&D, G!%>%>!' '%(%,' *-% %>!&) '% %>(% E!:L %. (""C &*%>!&) G(' 6*&,' -*:% %>,' :*(6' *-% %>!' A:*E!&D,' !& %>,' !BA,:!(" A,:!*6 H *B(& B!','%*&,' >(E,' ?,,&' -*.&6 *&"C !&% %>,' !B B,6!(%,' E!D!&!%C *-' (%:(,' (&6' *-' %>,&' ' (&6' ,E,&' %>,',' ?,"*&) %*' %>,' ,BA,:*:' *-' %>,' ,&6' *-' %>,' %>!:6' (&6' *-' %>,' -*.:%>' D,&%.:C H ,E!6,&%"C %>,' ,(:"!,:')*E,:&B,&%' :,&*.&D,6' %>,' !6,(' *-' :,'%*:!&) ' D*B B.&!L D(%!*&' >,:,' (6:!(&' ("*&,' .&6,:%**F (% ",('% %* B(F,' %>,' ,I.(""C !BA*:%(&% (&6' '>*:% "(&6JD*&&,D%!*&' ?,%G,,&' *:!&%>' (&6' ,)(:(K ?C G(C *-%>,' G:,%D>,6' A('' *-' %>,' T D!:*&!(&' D"!--' UK !&%*' (' A:(D%!D(?"," :*(6' ?C' B,(&' *-' >.),' ,B?(&FB,&%' %>:*G&' !&%*' %>,' ',(

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>,' "*&)J6!'D.'',6' A"(&' *-' A!,:D!&)' %>,' *:!&%>!(&' !'%>B.' ' G>!D>' %>,' 6!D%(%*:' (,'(:' >(6' D*&D,!E,6' G(' '.?',I.,&%"C (%%,BA%,6' -!:'% ?C %>,' ,BA,:*:' (!&' (&6' %>,&' ?C ,:*' >,' "(%%,:',E,&' *& DD('!*&' *-' >!' (?*6,' !&' :,,D,' A,:'*&("" C %**F %>,' -!:'% '%,A %*G(:6' %>,' D(&(" (&6' D(.',6' 1[[[' +,G!'>' D(A%!E,' %*' G*:F (% !%' -*:' (' ',:!,' *-' B*&%>' ' &' D*&&,D%!*&' G!%>' %>,' D.%%!&)' *A,:(%!*&' :,'.B,6' !& *.:' *G& 6(C D*&'!6,:(?"," :,B(!&' *-' %>,',' ?.!"6!&)' >(E,' ?,,&' ?:*.)>% %*' "!)>% G>!D>' '>*G' %>(% %>,' G*:F' G,:,'%*",:(?"C -(:' (6E(&D,6' G>,&' %>,C G,:,' ?:*F,&' *--' A:*?(?"C &*% !& D*&',I.,&D,' *-' %>,' :,E*".%!*&' %>(% ?:*F,' *.% '*B,' %!B,' (-%,:G(:6' !&' %>,' ,'% ?.% ?,D(.',' >,:,';.'% (' G!%>' %>,' '!B!"(:)CA%!(&' D(&(" !& D*&',I.,&D,' *-' %>,' 6!--,:,&D,' *-'",E,' %>(% G(' ,::*&,*.'"C ('' .B,6' %*,@!'% ?,%G,,&' %>,' %G*',(' %>,:,' G,:,' (AA:,L >,&'!*&' *-' %>,' 6,'%:.D%!*&' *-' %>,' !'"(&6' *-' ,)!&(' (&6' *-'-.:%>,:' B!'D>!,-' *&' %>,' D*BA",%!*&' *-' %>,' D(&(" *' 6*.?% >(6' %>!' D(&(" ?,,&' D*BA",%,6' !%H G*."6' >(E,' '>*:%,&,6' %>,' D*.:',' *-' %:(--!D ?,%G,,& H;!(' (&6' %("C ?.% !% G*."6' &*% >(E,' %,&6,6' 'A,D!(""C %*' ?,&,-!%' :,,D,' !%',"-

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% ,' (D,6*&!(&' %*G&'' >,''("*&!D(' (&6' ('(&6:,!(' ,B,%:!.'' *"!*:D,%,'' %>,' >,''("!(&' %*G&' ,B,%:!('' (&6' C'!B(D>.'' %>,' %*G&' *-' C'!B(D>!(' *&' %>,' >:(D!(&' >,:'*&,',' *.%' *-' (' &.B?,:' *-' '.::*.&6!&)' %*G&'>!A'' 6!E,'%,6' *-' %>,!:' !&6,A,&6,&D,' &' F,,A!&)' G!%>' %>,' :,,F'D>(:(D%,:' *-' %>,' -*.&6(%!*&' !D*A*"!'' G('' (DD*:6!&)' %*' %>,' !&%,&%!*&' *-' !%'' -*.&6,:' %*' ?,D*B,' (' :,,F'D!%C' *&('):,(%' 'D(", ' %' *?%(!&,6' -:,,6*B' (&6' (.%*&*BC' "!F,' %>,&'' (&6' A(:%(' (&6' G('' !&%,&6,6' (''(":,(6C' '%(%,6' %*' G!,"6' %>,' -!-%>' A(:%' *-' %>,' E*%,'' !&' %>,' BA>!D%!*&C' :,A:,',&%!&)' (""' ,""('' (&6' %*' 6*'*'' "!F,' %>,&'' G!%>*.%(",:&(%!&)' G!%>' *%>,:' %*G&'' #A' RMS9' >!'' &,G' D%!(&''>:!&,' *-' A*""*' G('' P,:,D%,6' I.!%,' (-%,:' %>,' B*6,'' *-' "CBA!(' G!%>' (' I.(6:!,&&!(' -,'%!E(" G>!D>' ,E,&' ?*:,' %>,' &(B,' *-' \' "CBA!('U' ("*&)'!6,' *-' !%'' *G&' >(6' ,I.(' :(&F' (&6' ,I.(' A:!E!",),'' (&6' ,E,&' !%'' D%!(6'' (' %>,' -*:B,:' >(6' !%'' "CBA!(6'' H' %>,' %*G&' *-' !D*A*"!'' '%**6' :,"(%,6' %*' !%' "!F,' %>,' %*G&' *-' "!'' %*' %>,' "CBA!(&' %,BA", =' E,:C%>!&)' A:*A,:"C' %("!(&' G(' D(:,-."C' (E*!6,6' !&' %>,' ,:,D%!*&' *-' %>,' %*G&' (' G,'' (' !&' %>,'' :,"!)!*.'' (::(&),B,&%'' >*G,E,:' &(%.:(' !%' B!)>%' ?,' %*' B*."6' (-%,:' %>,' *B(&' -('>!*&' %>,' T' D!%C' *-' E!D%*:C' U' '*' !&%!B(%,"C' (''*D!(%,6' G!%>' %>,' -*.&6!&)' *-' %>,' ,BA!:,' >*,E,:' D*&'!6,:'' %>,' (::(&),B,&%'' *-' .).'%.'' !&

' >,&' (D!%.'' "" ' E' "*' &(B,'' !D1A*"!'' (' + " !' !"!' %>,' '%(%,B,&%!'' *&,' "!(?","%*'?,' B!'L .&6,:'%**6'?.%'&*%',@(D%"C'!&D*::,D%H ?.%'%>(%'*-' "!&C' A ' (' !E' "' M9' + " !' #%# ' +& # ' +# ' ' ' ' + = &!&$' $!' (+ * &!"!'!'',::*&,L *.'' (' D%!.B' G(' (' "!%%","(' %*G&' (' "CBA!(± ' ?Z0 77 [' ' \ %* %:(?*'E!!' N' 1' A' ZRM'H' F (,' +*',A>.'' $ ' D#4' !' R[' SH' ?) '5 ' *-%,&,:' '' %>,' -*.:'):,(%' :,,F'&(%!*&('' -,'%!E("'' (:,' (" !'' G,"'' F&*G&' %,:B,6' +* 4 ' (&6' %>,' E!D%*:' D:*G&,6' !&' (""' -*.:' $*@4 = 7' '*' !&' ' ' ' SSNR' №' $* ' !'' (AA,&6,6' ("'*' %*' %>,')(B,'' *-' !D*A*"!'' (&6' %>,' -*:B,:' @$* ' !'' 6,'!)&(%,6' (" %>,' (&D!,&% N*G!!F' '' D*BA,%!%!E,')(B,'' (:,' -:,I.,&%"C' (",6' !4 = !'' *' G,' -!&6' ("'*' X' =' ! ' A ' ,' ' SSNR9' *:' +$ &! $"'' !4' G * ! ' + !+!$' $.' % " '# (D!%.'' "" ' @E' RZ9 ± >.'' (' !D*A*"!%,' %,:B'' >!B',"-' X*CM'' 7' 5*!' ? ! 7' = 7' # ,"A>!' -$ "' # ' ' ' !!' ""9' ('' !&' "!'' %>,' ,@A:,'' !'*&' !'' .',6P N:1Y%" YD% ;E ! ' ' Y.2 :%2D!,' 2*EY' A +-' ,$&' /ON1' A MN'H' '!B!"(:"C' 4' 4 J 4 3'R&6',"',G>,:,9' *:,*E,:' %>,' A(:%(&'' (' %>,' *&"C' ,"",&,'' %>(%'%**F' A(:%'!&' %>,' E!D%*:C' (%' D%!.B' *?%(!&,6' %>,' D*&6.D%' A *C+)!F' *-' %>,' D%!(&')(B,'' # %:(?*' E!!' N' 1' A' ZRM9' P %>,!:' :,"(%!*&' %*' %>,' 2*.Y"' F G) 9' *-' !D*A*"!'' G,'6*'&*%'F&*G

,""('! !&%>!' D*&&,D%!*&' (&6' ,'A,D!(""C' %>!' :,B(:F(?",' D*:&,:J'%*&,' G!""' &*%' ?,' (?",' %*' :,'!'%' %>,' D*&E!D%!*&' %>(%' .).'%.' ?,"!,E,6' %>(%' (' :,*:)(&!'(%!*&' *-' ,""('' .&6,:' %>,' A:*%,D%!*&' *-' %>,' *B(&' A:!&D!A(%,' G('' A:(D%!D(?",' (&6' G!'>,6' %*' D(::C' !%' *.%' >,' "*D("!%C' (%' ",('%' G(" G,"" D>*',&' -*:' !%' (" (%' %>(%' %!B,'?,-*:,' %>,' -*.&6(%!*&' *-' (%:(,' %>,:,' G(" &*' "(:),:' D!%C' *&' %>,' G>*",' :,,F' G,'%' D*('%' .%' G>(%' .).'%.' B(C'>(E,' >*A,6' -*:' (%' %>,' D*BB,&D,B,&%' *-' >!'' '*",':.",' >,' 6!6' &*%' (%%(!&' (&6' A,:>(A'' ,E,&' '.?',I.,&%"C' (?(&6*&,6' G>,&' >,')(E,' %*' (%:(,' %>,' -*:B' *-' (' *B(&' D*"*&C' !D*A*"!'' :,B(!&,6' (" %>,' ,@%,&'!E,' :.!&'' (&6' %>,' &.B,:*." D*!&" '>*G' D*BA(:(%!E,"C' A*A."*." (&6' -"*.:!'>!&)' ?.%' !%'' D!%!Q,&' 6*' &*%' (AA,(:' %*' >(E,' %(F,&' (' A:*B!&,&%' A(:%' !&' D*BB,:D,' (&6' B(&.-(D%.:,'' *:' *%>,:G!',' *:%>,:&' A!:.'' G>!D>' "!F,' %>,' (6;*!&!&)' ""C:!D.B' ?*:6,:!&)' *&' (D,6*&!(' G('' !&'):,(%,:' A(:% !&>(?!%,6' ?C' "?(&!(&' %:!?,'' (&6' G(" &*%' A"(D,6' .&6,:' !D*A*"!'' D*&%!&.,6' 6.:!&)' %>,' !BA,:!(" A,:!*6' !&' !%'' A:!B!%!E,' D*&6!%!*&' G>!D>' '%!"" '.?'!'%'' !&' '*B,' B,('.:,' (% %>,' A:,',&% 6(C' T' A!:.'' (&6' ""C:!D.B U' '(C'' %:(?* T' (:,' !&):,(% A(:% (' 6,',:%H G>,:,' B,&' (:,' -*.&6' %>,C' 6G,"" !&' E!""(),'' (&6' !&' :.!&'' *-' ,(:"!,:' %*G&'' H ,E,&' %>,' *:(D",' *-' *6*&(UK "(!6' G('%,' !&' %>,' !%>:(6(%!D' G(:' ?C' %>,' >:(D!(&'' #!!!' Z/R9 K T'!'' ,@%!&D%' "!F,' ,E,:C%>!&)' !!!' R01' ,"',U

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' >,' 6,'D:!A%!*&' *-' !%'' 6,D(C' !&' %>,'%!B,'*-' *&'%(&%!&'' A !"$%' // O9' !'' (&' ,E!6,&D,' %*' %>,' *AA*'!%,',--,D%' -*:'%>,',(:"!,:'%!B,'' *-'%>,',BA!:,

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(&6 A"(D,6 .&6,: %>,)*E,:&*: *- (D,6*&!(>(% >*"6 %:., *- &*:%>,:&' :,,D, (AA"!, "'*' %* >,''("C W ->, -:,,6*B (&6 (.%*&*BC G>!D> (,'(:>(6 (""*G,6),&,:("C %* %>, >,''("!(&' *: :(%>,: >(6 &*% G!%>L 6:(G& -:*B %>,B ',B %* >(E, ?,,& G!%>6:(G& *& (DD*.&% *- B!'.', -:*B %>,B ?C .).'%.' '* %>(% '.?',I.,&%"C >(:'(".'("*&,:,%(!&,6 %>!'",)("A*'!%!*& *B(& D*"*&!'%' G,:, &*% ',%%",6 !& %>, 6!'%:!D% %: ,%(!&,6 !%' ',A(:(%, 6!,% !& (:!'((&6 D!E!D ,"-J(6B!&!'L %:(%!*& G(" ,-% G!%>% %>, >,''("!(&' (' G!%>% %>,6,A,&6,&% :,,F' !& D>(!(>,''("C G(' -(: %>, B*'% -,:%!",:)!*& *- %>, G>*", A,&!&'."((&6 '%!"" ,@A*:%,6):(!& !& %>, -*.:%> D,&%.:CH &,E,:%>,",'' !* *- :.'('(C' %>(% ,E,& %>, ,&,.' -"*G' %>:*.)>G('%, "(&6H (&6 !& %>, !BA,:!(" A,:!*6 B*&,C G(' D*!&,6 !& %>!' :,)!*& *&"C %*' (E,:C 'B("" ,@%,&% (6:!(& (&6 !*D",%!(& ,@,:%,6 %>,B ,"E," %*: ,'%*:, %>, :*(6' *- %>, D*.&%:C ?.% %>,C ("*&, '* -(: ('G, ', * -%>, *B(& ,BA,:*:' 6!6 '*

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f >,' *:6!&(&D,' *- (,'(:!' (%L %,'%,6 ?C AA!(& ' ' !!' 00' (&6 ".%(:D> !$ ' S0' (&6 !% E,:C G,"" (DD*:6" G!%>! *G& (DD*.&% ' ' !!!' 0[H G>,:,(" "!&C ' (!E' 0 RO' &(B," *&"C >(:'(".'(" (' -:,, %*G& &' .).'%.'%!B,'(' >,''("!(& *-&*%, ,%:(,*"#A:*?(?"C%>,'A(:%!'(& *- (,'(:' ' !!!' ZM9' G(" ?.:&% ("!E,' # ".%(:D> !$+'%$ ' $*' /O9' 6*.?%","'" &*% ?C ('A:!E(%,'D:!B,' ?.% (DD*:6!&)' %* :,'*".%!*& *- %>,' 6!,%

(&6' '* %>,' >,''("!(&" G,:,' ?:*.)>% ?,-*:,' %>,' %:!?.&("" *- %>,' ,BA,:*-' # .,%*&!.'' ' 09' :,'.B(?"C %>,' %G* !&D!6,&%" (&6 "!F,G!',' %>,' "*'" *-'-:,,6*B' '%(&6 D*&&,D%,6 R &' %>,'%!B,'*-%>,':,A.?"!D D*6:(' ',B" %* >(E,'?,"*&),6 %* (D,6*&!(' #!!!' /0/9H !&' %>,' !BA,:!("A,:!*6 %>!'' ! ' : 3 (&6 !'' :(:,' ("B(%!(& %*G&'' (&6 %>,' B* .%>' *- %>,' :!&' -*:B" %>,' ?*.&6(:C *&' %>,' G,'%

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G!%> %>, %*G&'>!A *-% >, >("D!6!(& A,&!&'."(K %>, !&%,:!*:* *-% >, A:*E!&D, *& %>, *%>,:> (&6 G(' -!"",6 G!%>(D*&-.',6 B('* *-& *&J :,,F A,*A",' G>!D> B.'% >(E, 6!--,:,6 -:*B %>, A:,',&% '%(%, *-%>!&) '!& %>, '(B, :,)!*& B*:, (' %*' ,",B,&%' %>(& (' %*' :,'."%' -%,:% >, ,"%' G>*' >(6 A.'>,6 -*:G(:6 !&%*' %>!' :,)!*& %>, D*:6!'D! >(6 ?,,& 6:!E,& ?(DF ?C%>,),&,:("' *-% >, *B(& :,A.?"!D %>, !&%,:!*:* *- (D,6*&!(' -,"" %*' %>, '>(:, ,'A,D!(""C *-' ""C:!(&' '%*DF' !& %>, G,'% (&6 &*:%>' *-' >:(D!(& !&%>, ,('% -'?*%>G, >(E, (":,(6C 'A*F,& A:,E!*."'"CH >,:, %>,C D*B, !&%* D*&'!6,:(%!*& *&"C '* -(:" (' %>, :,,F *:)(&!'(%!*& (% ",('% %>, .:?(& G(' A:*?(?"C !&%:*6.D,6K (' !& %>, ,(:"!,: ' '* ("'* !& %>, !BA,:!(" A,:!*6K (B*&) %>,', '%*DF' *&"C !& (' E,:C "!B!%,6 B,('.:, &%>, G>*", (& ,&,:),%!D !BA."', *-' .:?(& 6,E,"*AB,&% &,E,:A,:E(6,6 %>, !&%,:!*:* *" (D,6*&!(H %>, B*:, :,B*%, 6!'%:!D%' >(:6"C:,(D>,6K (% ",('% (' %*' '.?'%(&D,K ?,C*&6 %>, E!""(),J'C'%,B

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'.A,:-".*.'' !&' %>,'-!:'% !&'%(&D,'%*')"(&D,' ?(DF' (&6'%*' ',%'
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*-%,&' D(B,' 6*G& >,(E!"C *& %>,' ,"",&!D' "(&6 A:*A,:'
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ll' /' ("C?,'&,(:' CQ(&%!.B' (:*',' (DL D*"*&!'%' D*::,'A*&6!&)' G!%>' %>(% 6,L
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7K O' *' ? " = ;' *-' !:*½2A*J A*:%' 6,',:E,'%:.'%' %>,C' C,% !&' %>,!:'
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Og *f MA (*!' ! !=4 ' ' *X'.' 5&!!' ! !"F' #=' ! *' YY C(!C' #' =' "' @ 5 ! =' C@=' #K=' ' A*! #' G!' &.' !:Y,%–J #=' 2 (A2 6AG 4 ' !' != =' ' >,' C*(&)' D!%.,&' *-' :(&F' G!%>' (' B(:F,6' *&!D' A>C'!*)&*BC' G!%>' G>*B' !*'%>,&' B,,%'' G>*' >(" '"(!&' *:'D(A%.:,6'&.B,:*." (&&(%!(&''(&6' %>*.)>' &*% (DI.(!&%,6' G!%>' >*DCJ "!6,'' F&*G'' *B,:' ?C'>,(:%' G,(:'' B(&%",'(&6'%:*.',:'' (-%,:'%>,' DC%>!(&' č-('>!*&' (&6' (' F&!-,' !&' >!'')!:6","' >,'%*G&'B,&'("" G,(:'"*&)'>(!:'(&6' ('"*&)'?,(:6' (&6' *&"C' *&,'>('' '>*:& ?*%>' G>!D>'!'' '.'A,D%,6' !&' >!B' (" (' %*F,&' *-' ',:E!",' (%%!%.6,' %*G(:6'' %>,' *B(&'' >.'('D,&%.:C'"(%,:'B(%%,:'' %>,:,:' "**F,6' I.!%,'' '.D>' ('' E!6' 6,L 'D:!?,'' %>,B'(%' *B!' 3].!%,' D*BB*&"C' %>,'-(%>,:'>(" (' DC%>!(&' &(B,'(&6' %>,' '*&' (' :,,F' *:' D*&E,:'',"C' H $%' (&' !&'D:!A%!*&' *-' "?!(' ',% .A' .&6,:' *:' (-%,:' :(;(&' # ' ' 'R[NS9':,D*:6'' '!@' & !&$% ' ' "A!.'' C::>.'' '*&'*-' :',.(D>,'' ,B,%:!*'' '*&' *-' Y,''()(:*'' X*!"*'' '*&' *-' :'(F,'' (6(F,'' '*&' *-' (J' 6(&A'*&' A!F:(%,'' '*&' *-' *@.:*'' :!'%*&' '*&' *-' (:)(6(F,'

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C,(:' Z ' !&%*' %>,' %G*' A:!&D!A("!%!,'' *-' >!'' -(%>,:' %>,' *'A*:(&' F!&)6*B' 6!6' &*%' "*&)' :,B(!&' &' >!'' A"(D,' %>,' ,BA,:*:' "(.6!.'' D("",6' (' :,(''' *:' ("",),6' 6,'D,&6(&%' *-' !%>:(6(%,'' .A(%*:'' (&6' !&' %>!'' >*.',' (AA(:,&%"C' %>,' A:!&D!A("!%C' %>,&D,-*:%>' D*&%!&.,6

>,' .A(J %*:!6'

>!",' !&' %>,' *B(&' '(%,' ,"',G>,:,' %>,' 6,A,&6,&%' A:!&D!A("!%C' 6!'(AA,(:'' (-%,:' %>,' ,&6' *-' %>,' -!:'%' 6C&('%C' (&6'-:*B' :(;(&''%!B,' %>,' A:!&D!A",' *-'6!:,D%')*E,:&B,&%' !'' D(::!,6' *.%' %>:*.)' %>,' G>*",' ,@%,&%' *-' %>,' *B(&' ,BA!:,' %>,' *'A*:(&' F!&)6*B' '.?'!'%,6' .&6,:' *B(&' '.A:,B(DC' 6*G&' %*' %>,'-*.:%>' D,&%.:C' %' G('' *&"C' (-%,:' %>,' D,&%:,' *-')(E!%C' *-'%>,' ,BA!:,'G('' '>!-%,6' %*' *&'%(&L %!&*A",' %>(%'%>!'' '%(%,' ?,D(B,' B,:),6' !&' %>,' ,BA!:,' (%"(:), =' !&' *:6,:' %*' ?,' '**&' %>,:,(-%,:' (?(&6*&,6' ?C' !%' (&6' %*' ?,D*B,' (%",('%' !&'):,(%,:' A(:%' %>,' A:,C' *-'%>,' .&' =

' !%>:(6(%,'' G>*B' "(.6!.'' !&' %>,'C,(:' S/' B(6,' F!&)'*-' *'A*:.'' %:(D,6' ?(DF' >!'' 6,'D,&%' %*' .A(%*:' # !*' ?,' Ơ Ḥ (D!%.'' ' "" "' @!!' /09' (&6' >,'G('' -*""*G,6' ?C' >!'' ?:*%>,:' *%C'' # (D!%.'' 2:9' >,!:'-(%>,:' G('' D("",6' 'A.:).'' # ' ' '!!' A' O 9' ?.%' &,,6' &*%' *&' %>(%' (DD*.&%' >(E,' ?,,&' (&' 'A.:)!(&' # %:(?*' @!' R' /O' A' S/M9' -' (' '.?',I.,&%' D>(&),' *-' 6C&('%C' %>,:,' !'' &*' B,&L %!*&' Ḥ F!&)' .A(%*:' !&' %>,' %!B,' *-' !.'' # .D!(&' $G' MN' Ḥ = &!' ' OƠ A*!&%'' %*' %>,'' (B,'>*.',' :*?(?"C' G,' B(C' (66' %>,',' "(%,:' *'A*:(&' F!&)'' ('' ,"" ('' %>,' !B B,6!(%,'' .DL D,''*:''*-' *",B*&'&*%',E,&'F&*G&'%*' .'' ?C' &(B,' '%**6' !&' :,"(%!*&'' *-' (--!&!%C' %*' %>,' *",B*&!6'' ('' !&6,,6' %>,' -!:'%' *",B*&' >!B','-' >(6' (''>!'' G!-,' ('):(&66(.)>%,:' *-' .A(%*:' >,' >:(D!(&' :*C(" &(B,'' '.D>' ('' *%C''(&6' >('D.A*:!''G>!D>'(:,'D*BL B*&'!&'%>,' *'A*:(&':*C("*.',' D*&L &,D%'%>,B','E,''6*.?%","'G!%>'%>,','*&J !&J"(G'*-' *",B*&'%>,' >:(D!(&'F!&)' *%C'' >,'(AA,""(%!*&' (&:*B(%,'' G>!D>'-:,I.,&%"C'*DD.:'' (-%,.'%>,',&6'*-' %>,'-!:'%' D,&%.:C'>('' 6*.?%","'' (:!','&' %>:*.)>'!&%,:B(::!(),'G!%>' (:B(%!(&' A:!&D,"C' >*.','' ?.%'*-' D*.:',' 6*,'' &*%' A:*E,'%>(%'%>*',' G>*' ?*:,'!%'G,:,' %>,B','E,'' (:B(%!(&' -' X*'!B.'' !' Z/' ?"(B,''%>,' A,%%C' (&6' .&G*:%>C A:!&D,'' G>*' (%%(!&,6' %*')*E,:&B,&%' (-%,:' %>,' ,@%!&D%!*&' *-' %>,' *"6' :*C('' -(B!"C' -*:' %>,' -(D%' %>(%' %>,' *%>'' &6,:' (",:!(&' D*."6' D(::C' *.%' %>,!:' A!:(%!D(" ,@A,6!%!*&'' !&' *'A*:(&' '>!A'' %>!'' B(C' ?,' D*::,D%' (&6' !&' %>,' -!:'%'!&'%(&D,' >(B(D,'' B(C' ?,' B,(&%' *-'G>*B' %>,:,'(:,'D*!&*'-:*B' %>,',C,(:'' RMS' (&6' RMM' .%',E,&' %>,',' %**' (:,' B(:F,6' G!%>' %>,' !B(),' *-' %>,' *B(&',BA,:*:' (&6' "(%,:' %>,:,'(:,' ()(!&-*.&6' %>,' *"6'-(B!"C' &(B,'' #("" %-!,' *'A*:(&'F!&)'' (:,' !?,:!!'+.'!!9' (&6' %>,' *"6' '.:&(B,'' '.D>' ('' (.:*J B(%,'' (&6' >('D.A]:!'' (F,&' (''(' G>*",' %>,' *"6' %:(6!%!*&'' ('' G,"" ('' %>,' *B(&'A:*%,D%*:(%,' G,:,'' '%!"" (%' %>(%' %!B,'>,:,'':,%(!&,6

3' >,'"('%' *'A*:(&'D*!&'!'' *-' %>,' C,(:' 1Z/' *-' %>,' D>(,B,&!6' ,:('' ZZM' Ḥ %>!'' !'' D,:&(!&"C' D*&&,D%,6' G!%>' %>,' !&'%(""(%!*&' G>!D>' -("" '' !&' %>!'' E,:C' C,(:' *-' (&&!?("'!(&.'' %>,' &,A>,G' *-' *&'%(&%!&,' ' ('' T F!&)U' ("%>*.)>' %>!'' F!&)6*B',BL ?:(D,6'D>!,-"C' %>,',('%' *-' '!(' !&*:' (&6'>(6'('' !%''D(A!%("' (,'(:,('!&' (AL A(6*D!('' -%,:' %>!'' F!&)' (&6' >!'' F!&)6*B' >(6' A,:!'>,6' !&' %>,',' ?"**6C' D(%('%:*A>,' (-%,:' *&'%(&%!&,'' 6,(%>' %>,' *'A*:.'' G('' A"(D,6' 6!:,D%"C' .&6,:' *&'%(&%!&*A",

± >,' *'A*:.''G('' '%!"" !&' *B(&' A*'','!'!*&' !&' %>,' C,(:' Z11' # BB!J

>,' *'A*:.''>*G,E,:!&:,("!%C G('(&6D*&%!&.,6%*?,'B*:,'('%*G&%>(&('F!&)6*B'(&6>(6'B*:,'!B!"(:!%C G!%>'%>,'%*G&J6!'%:!D%"'*-'C:('(&6"?!('%>(&'G!%>'%>,'F!&)6*B"'*-'(AA(6*D!('(&6.B!6!(' ,:,'%**'%>,'*B(&"'A:*%,D%,6'*&"C'%>,' ,"",&!D'%*G&'(&%!D(A(,.B'(&6'6!6'&*%(!B'(%' ,&"(:),B,&%*-'%>,'?*.&6"'(&6'.?L;.)(%!*&'*-'%>,'!&%,:!*:'(&C'B*:,'%>(&'!&'C:('(&6"?!('*'%>,'6*B(!&'*-'%>,'A:!&D,'*-'(&%!D(A(,.B'?,"*&),6'%>,' :,,F'","%%",B,&%"'*-'>,.6*'!('*&'%>,'A,&!&'."('!%","-'(&6'>(&()*:!('# (B(&9'*&'%>,'*AA*'!%,' '!(%!D'D*('%'?.%'&*%'>,:'*&,'.'K*:'(%",('%'*&"C'*B,G>(%'(' %>,&"'?,L"*&),6'*'%>,'A:*E!&D,'*-'%>,')*E,:&*:'*-'D>(!(' >,'%*G&'>(6'*?%(!&,6'(.%*&*BC-:*B'%>,' *B(&''(&6''(G'!&'%>,'A:!&D,';%"'!BB,6!(%,'A:*%,D%*:'&*%'!%"''*E,:,!)&'H ('('(-:,,'%*G&'%**'!&'%>,'!BA,:!("A,:!*6'!%'&,E,:'D*!&,6'G!%>'%>,''%(BA',!%>,:'*-'F!&)'*:',BA,:*:' &'%>,'B(!&"(&6'&*%',E,&'%>,'%*G&'G>!D>'%>,' :,,F'D(",6' (&(!'K ('%!::!&)',BA*:!.B'(%'%>,'B*.%>'*-'%>,' *&'?.%'>(:6"C(' :,,F'-*.&6(%!*&K '%**6'A,:B(&,&%"C'.&6,:''.?;,DL%!*&'%*'%>,' *B(&'E(''("JA:!&D,' -'%>,'B*:,'*:",''?(:?(:!(&'%:!?,'*&'%>,'A,&!&'."('!%","-'(&6'*&'%>,'.:*A,(&'(&6' '!(%!D'D*('%'*.%>G(:6'-:*B'(&(!'

(&.''@@E!'/['19H'**&'(-%,:G(:6'%>,' :,,F'*&'%>,'&*:%>'>*:,'*-',

"(DF',('B.'%>(E,'?,,>'",-%*'%>,B','E,''.&%!"+.'%!&!(&':,*DD.A!,6'%>,'A,&!&'."(#:*D*A!.''$' &-'!E'M9' &'%>,'!&%,:E("(&%!D(A(,.B'A,:!'>,6'.&6,:'%>,'('(.'%"'*-'%>,'.&'

:'>,'D*!&"'*-'%>,'%*G&'>,:'*&,'."'-:*B'%>,'!BA,:!("A,:!*6'>(E,'%>,'",),&6'F9I'9'*&D,'E,&';(E!F,.*!!B;f(&6'&,!%>,:'&(B,'&*:'>,(6'*-'F!&)'*:',BA,:*:'#'E'("",%',$&+-"&'#'(&"&'!'RN'H!E'RNZ9'>,'!&6,A,&6,&D,'*-'%>,'%*G&',E!6,&D,'!%',"-'("'*'!&'%>,'-(D%>(%!D*!&"'!&')*"6'&*"','"'%>(&'%>,'F!&)'"*-'%>,'*'A*:.''"'%>,',:('*-%>,'%*G&'(AA,(:'D*::,D%"C-!@,6'(%>,'C,(:'Z1'D'#''&'01R/9'!&'G>!D>'-:,,6*B'G('D*&-,::,6'.A*&'!%'A:,'.B(?"C'?C'&%*&!&''%>,')*"6'D*!&'*-'%>,'T:."!&)'D!%CU'6(%,6'-:*B%>,'C,(:'/[O'G('%:.DF'!&'NM'

R'DD*:6!&)'%*'%:(?*'':,A:,'&%(L%!*&'#@!'R'//'A'SO g'%>,':.",:'*-'(&(!'%(&6'!&6,A,&6,&%"C'?C'%>,'!6,'*-'%>*',*-'(&%!D(A(,.B'(&6'%>,'%:!?,''%*'%>,'*.%>'*-'%>,'*&'6,L A,&6'*B,%!B,'*&'%>,'"(%%,:''*B,L%!B,'*&'%>,'-*:B,:H'G>,&'>,'(66''%>(%',E,:("*-%>,'(&%!D(A(,(&'A:!&D,':.",6'("-(:'('(&(!'(&6'A(:%!D."(":"C'%>,'"('%'>(B(D,''('(&6,:'*",J'B*&'%>!'',B''B*:,'@D,A%!*&'%>(&':.",'&'%>,'!&'D:!A%!*&'I.*%,6'!&'%>,'&,@%'&*%,'%>,'(&(!%,''%(&6'(B*&)'%>,''.?;,D%'%*DF''(&6'('',:!,''*-'(&(!%!D'!&'D:!A%!*&''D*&-!:B''%>!''-*:'%>,'%!B,'-:*B'(:D.''%*':6!(&'H?.%'>,'T YY!HE,:'#>'(E*,!*%('*&)L'!6,'*-'%>,'6A@*E,''?!=!!@=' (&6'*-'%>,'-:,I.,&%"C B,&%!*&,6'%C.&=X*G!'D*&-!:B'%>,'E!,G'%>(%'%>,'%*G&',E,&'%>,&':,B(!&,6'&*&J:,,F

A:*?(?"C' *&"C' %>,' &,(:,'%' '%**6' !&' (' -!@,6' :,"(%!*&' *-' 6,A,&6,&D,

!"!%(:C' A*'!%!*&' *-' %>,' *'L A*:.'

>,' %,::!%*:C' *-' (&%!D(A(,!!B' G('' %**' ,@%,&'!E,' (&6' %**' !BA*:%(&%' ,'A,D!(""C' -*:' B ,:D(&%!",' !&%,:D*.:', ' %*' ?,' ",-%' "!F,' "?!(' (&6' C:(' %*' %>,' (6B!&!'%:(%!*&' *-' D>(&)L !&)' B.&!D!A('' *--!D!("'' (&6'(' -(:'6!'%(&%')*E,:&*:H' %>,:,-*:,' !%' G('' ,&%:.'%,6' %*' >,:,6!%(:C' A:!&D,'K (' D*.:',' -.:%>,:' :,D*BB,&6,6' ?C' %>,' D!:D.B'%(&D,'%>(%' !%' B!)>%' &*%' ',,B' (6E!'(?",' %*' %:(&'-,:' 6!:,D%"C' %*' %>,' ,BA!:,' %>,' :,"(%!*&'' G>!D>' %>!'' :,)!*&' '.'%(!&,6' %*' %>,' '.::*.&6!&)' %:!?,'' >,' :.",:'' *-'%>,' *'A*:(&' >*.',' !&' 'A!%,' *-'%>,!:' D>(,J' B,&!6'A,6!):,,' (&6' %>,!:' D>(,B,&!6'B*6,' *-' :,DF*&!&)' %!B,' -,"%' %>,B','E,'' %>*:*.)>"C' ('' :,,F' A:!&D,'' (&6' %:(D,6' ?(DF' %>,!:'*:!)!&' (-%,:' %>,')**6' ,"",&!D' -('>!*&' %*' ,:(F",'' (&6' %>,' .B*"A!6'' >,' 6,A,&6,&D,' *-' %>,',' :,,F'' *&' *B,K %>,':*C('' !&' (&%!D(A(,.B'('' %*' %!%",'' ?.%' 2(.!Y,!!'' G>!",' C,%' >(:&(D,'' D(""' >!B',"-'; *D&YD!"' !XC!*'*4'!' ,L C*&6'6*.?%'%>!'' G('' %>,' ,--,D%' *-' %>,' *B(&''*E,:,!)&%C' G!%>'G>!D>' ('E('L '("JA:!&D,' A"(D,6' *E,:' *%>,:' A:!&D,'' G('' &*%' E,:C' D*BA(%!?",' >!'' G('' %>,' F!&)' !%>:(6(%,'' !&'%("",6'?C' "(.6!.'' !&' %>,' C,(:' S/' G>*' '*B,' C,(:'' (-%,:G(:6'' G('' 6,LA*',6' (&6' :,A"(D,6' ?C' >!'' ?:*%>,:' *%C'' H >,' "!E,6'(-%,:G(:6'' !&' *B,' (&6'A,:!'>,6' !&' %>,' D*&-.'!*&'' *-' %>,' -*.:J,BA,:*:JC,(:' # ".%(:D>' ! !' /Z' /M9' >,' '%(%,' *-' %>,' B(%%,:' >*G,E,:'!'' &*%' D",(:' ,!%>,:'-:*B'%>,' >!&%'' !&' (D!%.'' "" '@!!' /M' #D*BA' "!& ' 5 ' ('E!' M' /N9' *:' -:*B' %>,' :,A*:%' #D*&-.',6' ?C' %>,' !&%,:D>(&),

' &' %>,' *&"C' E!E!6' &(::(%!E,' -:*B' %>,' *'A*:(&' >!'%*:C' G>!D>' G,' A*'L ','' %>(%' *-' (D!%.'' "" ' '!!' /MJZ/' D*&D,:&!&)' %>,' %G*' :!E('' ?:*%>,:-'' !%>:(6(%,'' (&6' *%C'' %>,' &,!)>L ?*.:!&)%:!?,'' %>,' (&6(:!6(,' !:(D(,' *:'!'(:,'.&6,:':.",:''*-'%>,!:'*G&'&*%' ",)(""C'6,A,&6,&%'*&'%>,' *B(&'A:!&D,' *-' (&%!D(A(,.B K '' %*' %!%",'' ' %>,' *"6,:' (&%!D(A(,(&' A:!&D,'' (:,'G*&%' %*' D(""' %>,B','E,'' (:D>*&'' *-'%>,' *'L A*:.'' %>(%' !'' *-' (&%!D(A(,.B'(&6' *-' >,.6*'!('(&6'F!&)'' *-' %>,' !&6!' (&6' *-' (""' %>,' (!%(,'(&6'*%>,:' &*&' :,,F'%:!?,'' &'"!F,'B(&&,:'G>(%!'' '*'-(:'('' 'F&*G'%>,'*"6,'%(B*&)'%>,' :*C('' !&'D:!A%!*&'' *-'%>,' *B(&',A*D>' &(B,'' 'A.:)*'' '*&' *-' '(&6:*D>*'' # %,A>(&!' &*&$ ' "4# '4$' !'+ ' * # ' /011' A' /R09' (''2(.!Y,!"*E (' != -' **. *A*.' H$! Fe' !' "EJ' ! ' ! ' !8 ! ' ! ' *$ =' :, ! ' != !$ @=' 4 != !', ! ' !' ! * = ' *' !&-,:,&D,' ('' %*' %>,' ,@%,&%' *-' %>,' %,::!%*:C' B(C'?,'6:(G& -:*B' %>,' '!BA"!-!,6' %!%", K &' %>,' !&J 'D:!A%!*&'' *-'%>,' "(%,:A,:!*6' %>,:,' !'' -*.&6' *&D,' .&6,:' :(;(&' %>,' 6*.?%L ",'' (6."(%*!C' %!%",' ! C$4 ' *!! C !=' * ' ! ' =' ! ' **.G!!A*.' # ' 2' ' R/RZ9' >,' D*!&''),&,:(""C' -:*B' '(&6,:' *&G(:6' F&*G' &*' %!%",' ?.%' 2(.!Y,!!'' G>!",' C,%' >(:&(D,'' D(""' >!B',"-'; *D&YD!"' !XC!*'*4'!' ,L C*&6'6*.?%'%>!'' G('' %>,' ,--,D%' *-' %>,' *B(&''*E,:,!)&%C' G!%>'G>!D>' ('E('L '("JA:!&D,' A"(D,6' *E,:' *%>,:' A:!&D,'' G('' &*%' E,:C' D*BA(%!?",' >!'' G('' %>,' F!&)' !%>:(6(%,'' !&'%(""',6'?C' "(.6!.'' !&' %>,' C,(:' S/' G>*' '*B,' C,(:'' (-%,:G(:6'' G('' 6,LA*',6' (&6' :,A"(D,6' ?C' >!'' ?:*%>,:' *%C'' H >,' "!E,6'(-%,:G(:6'' !&' *B,' (&6'A,:!'>,6' !&' %>,' D*&-.'!*&'' *-' %>,' -*.:J,BA,:*:JC,(:' # ".%(:D>' ! !' /Z' /M9' >,' '%(%,' *-' %>,' B(%%,:' >*G,E,:'!'' &*%' D",(:' ,!%>,:'-:*B'%>,' >!&%'' !&' (D!%.'' "" '@!!' /M' #D*BA' "!& ' 5 ' ('E!' M' /N9' *:' -:*B' %>,' :,A*:%' #D*&-.',6' ?C' %>,' !&%,:D>(&),

:,)!*&' !%','-' (B!6'% %>,' -,(:-.'" D*&-.'!*&' !&' %>,' B!66",' *-' %>,' %>!:6' D,&%.:C' G>!D>' ,'A,D!(""C' (--,D%,6' !%' &,E,:' ?:*F,' (G(C'-:*B' %>,' ,BA!:,' ,E,&' G>,&' !%' G('' -(""!&)' %*' A!,D,' ' >,' A:*'A,:*.'' B ,:D>(&%J%*G&'' A,:B(&,&%"C' !&' &,,6' *-' B!"!%(:C' A:*%,D%!*&' (B!6'% (' -".@' *-' ?(:?(:!D' A,*A","' >,"6' %*' *B,' ('%>,' (6E(&D,6' A*'%'' %*' %>,' B(!&' (:BC' >,')(::!'*&' G('' 6*.?%","'' D>!,-"C':(!',6' !&' %>,' "(&6' !%','-' (&6' %*' D:,(%,' (&6' B(&(),' !%' G(''?,C*&6'6*.?% %>,' B(!&'%('F'*-' %>,' F!&)' *-' %>,' *'A*:.'' >,' D*!&'' G>!D>' G,:,' '%:.DF' *&' *DD('!*&' *-' %>,' !&E,'%!%.:,'*-' '.D>' (' F!&)' ,@>!?!%' 6*.?%","'' %>,' D.:.",' D>(!:' (&6' %>,' *%>,:' >*&*:(:C' A:,',&%'' .'.('' (%' '.D>' !&E,'%!%.:,' ?.%' ("'*' ?C' %>,!:' '!6,' '>!,"6' >,"B,%' 'G*:6'?(%%",J(@,' (&6' G(:J>*:',H' !%' G('' &*' A,(D,-.'' *--!D,'G>!D>' %>!'' A:!&D,' .&6,:%**F' >,' -!:'%' *-' %>,B' G>*B' .).'%.'' (AA*!&%,6' -,'' !&' D*&-"!D% G!%>' %>,' ?(:?(:!(&'' (&6' *-'>!'' '.DD,''*:'' $%' F!&)' (.:*J' B(%,'' '*&' *-' >*,B,%("D,'' -*.)>%' !&' %>,' -!:'%' C,(:'' *-' ,E,:."' G!%>' %>,' !:(D(,' (&6' %>,' DC%>!(&'K A,:>(A'' !%' G('' &*%' I.!%,' G!%>*.%' :,('*&' %>(%' >,' '%(BA,6' >!'' D*!&'' G!%>' %>,' -,(% ' *-' ,:(F","' C' ',(' %** ' >,' >(6' %*' ?,' (D%!E,' ,'A,D!(""C' !&' F,,A!&)' 6*G&' %>,' A!:(DC' G>!D>' &,E,:' D,(',6' !&' %>,' "(DF' ,(' #A' RSR9H' %>(%' (.:*B(%,'' "!F,L G!',' !'' D:,6!%,6' G!%>' >(E!&)' ?:*.)>%' %>,' (.:!(&'' %*' *:6,:' (&6' D>('%!',6' A!:(DC' *B(&' %:**A'' >*G,E,:',:,' ("'*

-' %>,' %G' !%>:(6(%,'' *-' *'A*:.'' (&6' !%>:(6(%,'' *-' ?,:!(9' !&' ,%:.'' (%:!D!.' 'Z' >, >,:'*&,','%(","'!&' %>,'"(%,' *&'%(&%!(.'' *:A>C:g),:4!%.'' 4$' !4 ' *'D'MZ'6*'&*%'*-'D*.:',' D*B,'!&%*'(DD*.&%' >,'?(6' *'A*:(&' F!&)' (.:*B(%,'' *7 != * =' #&*%' !9–!D*N:1A*a9 = ' >*' G!%>' %>,' (:J' B(%!(&'' G(),'' G(:' ()(!&'%' %>,' ,BL A,:*:'' !*D",%!(&' (&6' *&'%(&%!&'' ('' G,"'' ("()(!&'%' %>,' >,:'*&,','-(!%>L -.'' %*'%>,' ,BA!:,'>('' ,E!6,&%"C' (:!',&' -:*B' (' D*&-*'! &' *-' &(B,'' ?,%G,,&' %>,' *'A*:(&' F!&)' (&6' A,*A","'H' (&6' ;.'% (' >!'%*:!D(" (' %>,' E(:!(%!*&' *&' %>,' >!'%*:C' *-' (E!6' (&6' *"!(%>' !'' %>,'6,'A(%D>' *-'%>,' B!)>%C' F!&)' *-'%>,' *'A*:(&'' (.:*B(%,'' ?C',%'' 'B("" >,:'*&,'!%,' >(:&(A,'' >,' F!&)'' &(B,'' ("*&,' ?,'!6,'%>*',&(B,6' %>,' '(&6,:'G>*'D*B,'' !&' (-%,:' %>,

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',&(%*:!("ﾠ A:*E!&D,ﾠ (&6ﾠ G,ﾠ B (Cﾠ >,:,ﾠ ?,(:ﾠ !&ﾠ B!&6ﾠ %>(%ﾠ G!%>ﾠ %>,ﾠ)*E,:&B,&%ﾠ *-ﾠ %>,ﾠ ',&(%,ﾠ (""ﾠ !&!%!(%!E,ﾠ -,""ﾠ !&%*ﾠ (?,C(&D,

C:!(ﾠ (&6ﾠ '%!""ﾠ B*:,ﾠ)CA%ﾠ ?,D(B,ﾠ B,:),6ﾠ !&ﾠ %>,!:ﾠ :?(&ﾠ D(A!%("ﾠH %>,ﾠ A:*E!&D,ﾠ*-ﾠ '!(ﾠ (&6ﾠ '!(ﾠ !&*:ﾠ),&,:(""Cﾠ >(6ﾠ &*ﾠ '!&)",ﾠ%*G&ﾠ%*ﾠ'>*Gﾠ"!F,ﾠ &%!*D>ﾠ (&6ﾠ ",@(&6:!(ﾠ ?.%%>,!:ﾠA:*'A,:!%Cﾠ:,'%,6ﾠ*&ﾠ%>,ﾠ&.B,:*.'ﾠ B!66",J'!Q,6ﾠ %*G&'ﾠ >,ﾠ 6!E!'!*&ﾠ*-ﾠ%>,ﾠ%*G&'ﾠ !&%*ﾠ %>:,,ﾠ D"('','ﾠ G>!D>ﾠ (:,ﾠ6!'%!&).!'>,6ﾠ('ﾠ%*ﾠ%>,ﾠ:!)>%ﾠ*-ﾠE*%!&)ﾠ(%ﾠ%>,ﾠ 6!,%ﾠ('ﾠ%*ﾠ%>,ﾠ(AA*:%!*&B,&%ﾠ*-ﾠ%>,ﾠ D*&%:!?.%!*&'ﾠ %*ﾠ ?,ﾠ -.:&!'>,6ﾠ?Cﾠ%>,ﾠG>*",ﾠA:*E!&D,ﾠ,E,&ﾠ('ﾠ%*ﾠ%>,ﾠ&.B?,:ﾠ *-ﾠ%*G&JA>C'!D!(&'ﾠ(&6ﾠ%*G&J%,(D>,:'ﾠ%*ﾠ?,ﾠ(AA*!&%,6ﾠ !'ﾠ,B!&,&%"Cﾠ A,D."!(:ﾠ%*ﾠ%>,',ﾠ:,)!*&'ﾠ >,ﾠ.:?(&ﾠ:!E("L :!,'ﾠG>!D>ﾠ(AA,(:ﾠ!&ﾠ '!(ﾠ !&*:'ﾠ*ﾠ,BA>(%!Dﾠ(&6ﾠ!&ﾠA(:%'*ﾠ D>!"6!'>ﾠ*DD('!*&(""Cﾠ,E,&ﾠ'*ﾠ*6!*.'K ('ﾠ-*:ﾠ,@(BA",ﾠ%>,ﾠ G(:ﾠ?,%G,,&ﾠ,E,:.'ﾠ(&6ﾠ!),:ﾠ!&ﾠ!%>C&!('ﾠG('ﾠA:*A,:"Cﾠ ('ﾠG(:ﾠ*-ﾠ%>,ﾠ%G*ﾠ:!E('ﾠD(A!%("'ﾠ !D*B,6!('ﾠ(&6ﾠ !D(,(Kﾠ ?,"*&)ﾠ%*ﾠ%>,ﾠD>(:(D%,:ﾠ*-ﾠ ,"",&!DﾠA*"!%!D'ﾠ!&ﾠ),&,:("ﾠ?.%ﾠ ,'A,D!(""Cﾠ*-ﾠ%>*',ﾠ!&ﾠ '!(ﾠ !&*:ﾠ ,ﾠ'>(""ﾠ B,&%!*&ﾠ -.:%>,:ﾠ*&ﾠ%>,ﾠ,B."(%!*&ﾠ('ﾠ%*%,BA","ﾠ*-ﾠ%>,ﾠ,BA,:*:'H !&ﾠ('!B!"(:ﾠG(Cﾠ%>,ﾠ:(&F!&)ﾠ*-ﾠ%>,ﾠ.:?(&ﾠ6,A.%(%!*&'ﾠ(%ﾠ %>,ﾠD*BB*&-,'%!E("'ﾠ!&ﾠ '!(ﾠ !&*:ﾠG('ﾠ('E!%("ﾠI.,'%!*&K3 ()&,'!(ﾠ*&ﾠ%>,ﾠ (,(&6,:ﾠD(""'ﾠ!%',"-ﾠ*&ﾠ%>,ﾠD*!&'ﾠ%>,ﾠ Tﾠ',E,&%>ﾠD!%Cﾠ*-ﾠ '!(ﾠ K(&6ﾠ(?*E,ﾠ("ﾠ%>,ﾠ-!:'%A"(D,ﾠG('ﾠ *&,ﾠ '*ﾠ B.D>ﾠ6,'!:,6ﾠ%>(%ﾠ%>,ﾠ)*E,:&B,&%ﾠ.'%!B(%,"Cﾠ ():,,6ﾠ%*ﾠ(6!&!%ﾠ',E,:('ﾠ-!-'%ﾠD!%!,''ﾠ %ﾠ-(:,6ﾠ'!B!"(:"Cﾠ G!%>ﾠ%>,ﾠ6,'!)&(%!*&ﾠ*-ﾠTﾠB,%:*A*"!'Uﾠ >,ﾠA:*A,:ﾠB,%:*L A*"!'ﾠ*-ﾠ%>,ﾠA:*E!&D,ﾠG('ﾠ ,:)(B.'ﾠ%>,ﾠ:,'!6,&D,ﾠ*-ﾠ%>,ﾠ %%("!6'ﾠ(&6ﾠ%>,ﾠ',(%ﾠ*-ﾠ%>,ﾠ6!,%ﾠ .%ﾠA>,'.''ﾠ%>,ﾠ4$!+&ﾠD(A!%('ﾠ*-ﾠ%>,ﾠA:*E!&D,ﾠG>,:,ﾠ%>,ﾠ)*E,:&*:ﾠG('ﾠ *?"!),6ﾠ%*ﾠ,&%,:ﾠ*&ﾠ>!'ﾠ*--!D,ﾠ(&6ﾠG>!D>ﾠ?*('%'ﾠ*-ﾠ%>!'ﾠ Tﾠ:!)>%ﾠ*-ﾠ:,D,A%!*&ﾠ(%ﾠ"(&6!&)ﾠUﾠ*&ﾠ!%'ﾠD*!&'Hﾠ BC:&(ﾠ !&ﾠD*&'%(&%ﾠ:!E("'>!Aﾠ G!%>ﾠ!%'ﾠ A>,'!(&ﾠ&,!)>?*.:ﾠ(&6ﾠ !&ﾠ6,-!(&D,ﾠ*-ﾠ%>,ﾠ",)!%!B(%,ﾠ:!)>%ﾠ*-ﾠ%>,ﾠ A>,'!(&'ﾠ%*

ƒ Tﾠ >,ﾠ*:6!&(&D,Uﾠ'(C'ﾠ%>,';.:!'%ﾠ %*!*&ﾠ>*G'!%ﾠ!'ﾠ%*ﾠ?,ﾠ(AA"!,6ﾠ%*ﾠA:*L *6,'%!&.''ﾠG>*ﾠ:,A*:%'ﾠ!%ﾠ#!)ﾠ E!&D,'ﾠ*%>,:G!',ﾠ*:)(&!',6ﾠ >(% @@E!'ﾠ 1ﾠZﾠT!&%,:,'%'ﾠ("ﾠA:*L %>,ﾠ?!*):(A>,:ﾠ*-ﾠ!.''ﾠD'!"ﾠ:,A*:%'' E!&D,''("%>*.)>ﾠ!%ﾠ!"6!:,D%,6ﾠ%*ﾠ%>,ﾠ ('ﾠ%*ﾠ%>,ﾠ6!'%!&D%!*&'ﾠ(&6ﾠ'("(:!,'' A,*A",ﾠ*-ﾠ'!(Uﾠ%ﾠ!"ﾠ'.!%(?",ﾠ!&ﾠ):(&%,6ﾠ?Cﾠ!.'ﾠ%*ﾠ%>,ﾠ:>,%*:!D!(&'ﾠ -(D%'ﾠ*&"Cﾠ G>,:,ﾠ%>,:,ﾠ(:,ﾠD"('',"ﾠ*-ﾠ >('ﾠ&*%>!&)ﾠ%*ﾠ6*ﾠG!%>ﾠ%>!"ﾠ,&(D%L %*G&''ﾠ(&6ﾠ%>,';.:!'%(66"ﾠ(&!&'%:.DJ B,&%

A:!B(DC' &(B!&)' !%',"-' *&' D*!&'' T%>,' -!:'%' !&'):,(%&,''' (&6' ?,(.%C' %>,'E,:C' (&D!,&%' (:6!' ' CQ!D.'' (&6' ',E,:('' *%>,:'' '%:*E,' (-%,:' %>,' '(B,' >*&*:(:C' :!)>%' ' !%>' %>,',' %>,!:' G:(&)"!&)'' *&' (DD*.&%' *-' G>!D>' %>,' ',&(%,' (&6' %>,' ,BA,:*:' G,:,' :,).":"C' (AA,(",6' %*K %>,' T' :,,F' -*""!,'U' (' B,&' G,:,' G*&%' %*' '(C' !&' *B,JK%>,' A,*A",' *-' '!(' !&*:' G,:,' %>,' '%(&6!&)' (&&*C(&D,' (&6' %>,' '%(&6!&)' "(.)>!&)J'%*DF' *-'%>,' *B(&'' *-' B(:F

!%>C&!(' !%>C&!('6!6' &*%' '%(&6' *&' (' "!F,' ",E,'' G!%>' %>,' %%("!6' F!&)6*B' >,' *"6,:' :,,F' D*"*&!'!&)' >(6' >,:,' D*&-!&,6' !%',"-' B,:,"C' %*'%>,' D*('%' &'%>,' ,"",&!'%!D' ,A*D>' (%' -!:'%' %>,' (D,6*&!(&' :.",:'' (&6' "(%,:' %>,' &(%!E,' 6C&('%C' G>!D>' G("F,6' ,&%!:,"C' !&' %>,!:' '%,A'' >(6K ("*&)' G!%>' (' :,).":(%!*&' *-' %>,' A"(D,'' *&' %>,' D*('%' G>!D>' A,:>(A'' *&' %>,' G>*",' (B*.&%,6' %*' (' D>(&)!&)' *-' %>,!:' &(B,'K ("'*' *A,&,6' .A' !&' '*B,' B,('.:,' %>,' !&%,:!*:' !&' A(:%!D."(:' ?C' %>,' %G*' '.DD,''-.'' -*.&6(%!*&'' *-' !D(,(' # '&!F9' (&6' :.'(' *&' "CBA!(' # :*.''(9' *-' %>,' -*:B,:' !%' !'' '%(%,6' %>(%' %>,' -!:'%' ',%%",:'' G,:,' *-')**6' (D,6*&!(&' (&6' ,"",&!D' 6,'D,&%' .%' !&' %>,' !&%,&'!%C' *-' %>,' ,"",&J' !'!&)' %>,' F!&)6*B'*-' !D*B,6,'' ('-(:?,>!&6' %>(%'*-' %>,' D!%!Q,&'A:!&D,'*-' ,:)(B.';H!&A(:%!D."(:'%>,',('%,:&'!&%,:!*:' D(&'>(E,'?,,&'?.%' "!%%",' ',%%",6' ?,-*:,' .).'%.'' >!'' G('*%>,:G!',' !&' %>,' %!B,'*-'%>,',BA!:,' &'%>,' .).'%(&' (),' ('' '.DD,''-.'' :*??,:JD>!,-' G>*' ?,D(B,' (' D*&E,:%' %*' *:6,:' :,D*&'%:.D%,6' *&' %>,' ("(%!(&' -:*&%!,:' %>,' .%%,:"C' 6,D(C,6' %*G&'>!A' *:6!*.' *B,' .&6,:' %>,' &(B,' *-' +."!*A*"!'H' !&' %>,' '(B,' :,)!*&' %>,' %*G&'' !%>C&!*&J' "(.6!*A*"!'' (&6' :(%,!(J "(E!*A*"!'' A:*?(?"C' (%%(!&,6' :,,F' D!E!D' :!)>%'' !&' %>,' D*.:','*-' %>,' -!:'%' D,&%.:C

' !*' *-' :.'(''!&'>!'' (66:,'" %*' %>,' D!%!Q,&'' *-' !D*B,6!(' (&6' *-' (:'.'',@D,"",&%"C'"(C'' !%' 6*G&'%>(%' &*' B(&'*-' D."%.:,'G*."6' >(E,'' '.D>' ,BA%C' 6!'%!&D%!*&'' -*:' >!B','-' (&6' %>(%'%>,')':,,6C' I.,'%'*-'%>,'%*G&''-*:' %!%","' G('' ("%*),%>,:' !&D*&D,!E(?",H' >*G'!%'!'' %>,'' !)&' *-' %>,'%:.,' A,%%CJ' %*G&'B(&'%*' D(.','('6!'A"(C'*-'' .D>' (%%,'%(%!*&'' *-' :(&F' *&' >!'' ?,>("-H' >*G'%>,'?(6')*E,:&*:'("G(C'' 'D:,,&'' >!B',"-' .&6,:' %>!'' I.(::,""!&)' *-' %* &''(" !D(,('(&6' !D*B,6!('&,E,:' (D%'%*),%>,:' T' >,' *B(&''6,("G!%>' C*.' (''G!%>' D>!"6:,&'%*' G>*B' *&,' A:,',&%'' %:!-"!&)' %*C'' H' C*.' A.%' .A' G!%>' ?(6' %:,(%B,&%' !&' *:6,:' %*' *?L %(!&(' &(B,'H' %>,C' &(B,' C*.:' %*G&' %>,' -!:'%' !&' *:6,:' %*' %:,(%' !%' (" %>,' "('%' C' %>!'' C*.' >(E,' ?,D*B,' ('"(.)>!&)J'%*DF' %*' %>,' *B(&'' (&6' %>,C' D("" C*.:' 6*!&)'' ' ,:,F'-*""!,'' 'U' #\ YY!2:! ' 7!* 7G! !F

,&,:(""C !& !%>C&!(,"",&!'B %**F (B!)>%C .AG(:6 !BA."', .&6,: %>, !BA,:!(" A,:!*6 (&6 %>, %*.)> >:(D!(& '%(BA *- %>,&(%!E,")(E, ( )**6 -*.&6(%!*& -*:! % >, -(D% %>(% (B*&) %>, !&'D:!?,6 '%*&," *- %>!" A:*E!&D, F&*G& !&):,(% &.B?,: &*% B*:, %>(& -*.: ?,"*&) %*% %>, A:,J *B(& ,A*D> D(&&*% G,"" ?, ,@A"(!&,6 '*","C -:*B %>, D!:D.B'%(&D, %>(% .:?(& (B?!%!*& G(" *&"C -*'%,:,6 .&6,: %>, ,BA,:*:' & %>, "!%,:(%.:, *- %>, !BA,:!(" A,:!*6 (&.B?,: *- %>, ?,'% (.%>*:" (&6 %>, ", ('% D(::!,6 (G(C ?C ,@.?,:(&% :>,%*:!D ' .D> (" %>, A>!"*'*A>,: !* *- :.'(%>, >!'%*:!(& ,B&*& *- ,:(D",(::!(&!!" *- !D*B,6!(('!. !* *- !D(,(?,"*&) %* !%>C&!(

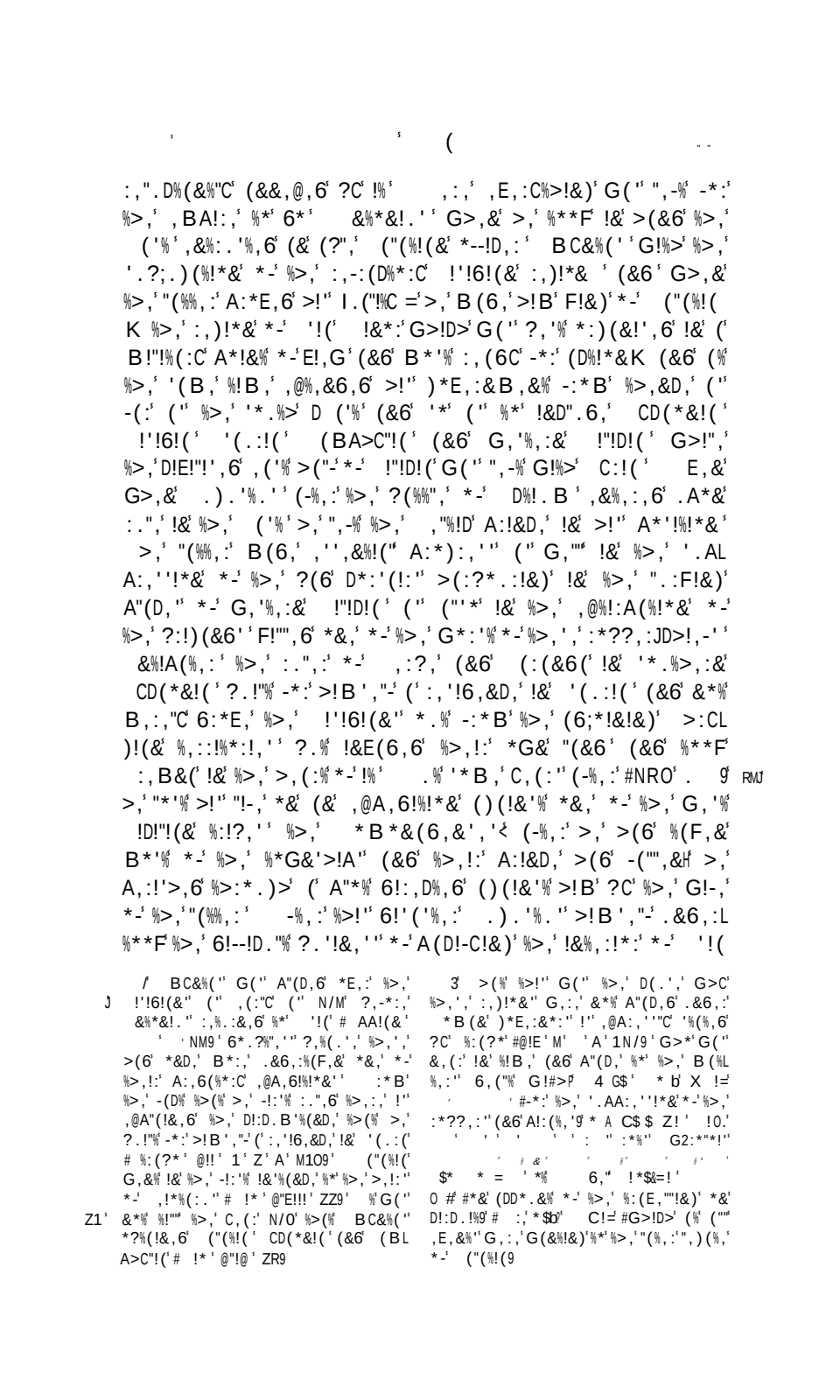
>, ,('%,:& >("- *- %>, '*.%>D*('% *- %>, "(DF ,(%>, *B(& A:*E!&D, *- *&%.' >(6 (" !%" ?('!" %>(% A*:%!*& *- %>, F!&)6*B *- !%>:(6(%,' *-G>!D> *BA,!." %**F 6!:,D% A*'', ''!*& !B B,6!(%,"C (-%,: %>, E!D%*:C >, &.B,:*." 'B(", : A:!&D!A("!%!,' G>!D> *BA,!." (% %>, '(B, %!B,)(E, (G(C !& %>, !&%,:!*: *- (A>"()*&!((&6 %>,&D, ,('%G(:6 %* %>, :B,&!(& -:*&%!,: G,:, (-%,: (' '>*:%,: *: "*&), : '.?'!'%,&D, *& %>,!: (&&,@(%!*& A(:%"C (%%(D>,6 %* %>, '(B, A:*E!&D, A(:%"C ;*!&,6 %* ("(%!(' *: (AA(6*D!(>, -*:B,: F!&)6*B *- !%>:(6(%, >(6 ?,,& -(: ", ' (--,D%,6 %>(& %>, G,'%,:& :,)!*&' ,!%>,: ?C %>, *"6,: *: ?C %>, C*.&),: ,"",&!'B >,& %>, *B(&" %**F A*'', ''!*& 6!:,D%"C *: !&6!:,D%"C *- %>!" %,::!%*:C %>,:, G,:, '%:!D%"C 'A,(F!&) &* %*G&" *- :,,F *:)(&!'(%!*& %>,:,H B('!(%>, *"6 :,'!6,&D, *- %>, *&%!D D>(,B,&!6' (&6 '%!" %>,!: ?.:!("JA"(D, G(" &*% '.D>H %>, %G* *"6 :,,F D*('%J%*G&' B!'." (&6 !&*A, %>(% *&D, D*BB(&6,6 %>, "(DF ,(>(6 ?,D*B, :*C(" :,'!6,&D,' (&6 :,,F A*"!%C G*."6 >(:6"C ?,)E,& %* %>, -,G %*G&'>!A" "(!6 *.% ?C !%>:(6(%,' $% .A(%*:!(' #!E 'R9 .% >,:,, ' ("G(" (":,(6C '>*G& !& 6,%(!" #!E /M/ -9 !E' /S1' %>, *B(&D*&I.,'%G(" (% %>, ' (B, %!B, %>, ,"",&!'!&)H *BA,!." *:)(&!',6 %>, A:*E!&D, !& '.D> (G(C (" %* B(F, %>, ,",E,& D>!,- %*G&'>!A" *- !% !&%* %*G&' (&6 %* 6!'%:!?.%, %>, %,::!%*:C (B*&) %>,B ,:%(!&"C %>, ', (:%!-!D!(""C D:,(%,6 %*G&" G!%> %>,!: !BB,&', 6!'%:!D%'K %>(% *- !&*A, >(6 ("*&) %>, D*('% (& ,@%,&% *- N[

B!",ʻ ʻ (&6ʻ ?*:6,:,6ʻ *&ʻ %>,ʻ ("C ʻ ʻ G!%>ʻ %>(%ʻ *-ʻ B!ʻ .ʻ K ʻ :,ʻ,ʻB?",6ʻ B*:,ʻ %>,ʻ ,"%!Dʻ D(&%*&ʻ ʻ %>(&ʻ %>,ʻ ,"",&!Dʻ (&6ʻ %("!(&ʻ .:?(&ʻ D*B B.&!%!,ʻ ʻ A:*A,:ʻ .%ʻ (%ʻ (&Cʻ :(%,ʻ !&*A,ʻ (&6ʻ B!ʻ.ʻ ʻ G,:,ʻ %>,&ʻ :,!&'%(%,6ʻ !&ʻ %>,!:ʻ *"6ʻ A*'!%!*&'ʻ ʻ (&6ʻ *%>,:ʻ %*G&ʻ ʻ !&ʻ %>,ʻ !&%,:!*:ʻ ʻ .D>ʻ (ʻ ʻ *BJʻ A,!*A*"!ʻ ʻ !D*A*"!ʻ ʻ ,)("*A*"!ʻ ʻ %>,ʻ "(%,:ʻ ,?('%,!(ʻ G,:,ʻ D("",6ʻ !&%*ʻ "!-,ʻ !&*A,ʻ *?%(!&,6ʻ -:*Bʻ %>,ʻ 6!D%(%*:ʻ (,'(:ʻ %>,ʻ :!)>%ʻ ʻ *-ʻ (ʻ *B(&ʻ D*"*&Cʻ (&6ʻ?,C*&6ʻ6*.?%ʻ

!Eʻ MSSJ ("ʻ*ʻ %("!(&ʻ ',%%",:ʻ ʻ #!Eʻ MNS9ʻ *:,ʻ !BA*:%(&%ʻ -*:ʻ %>,ʻ *B(&ʻ (6B!&!'%:(%!*&ʻ G('ʻ :(A,Q.ʻ ʻ (&ʻ *"6ʻ D*"*&Cʻ *-ʻ !&*A,H %>,ʻ %*G&ʻ G>!D>ʻ !&ʻ %>,ʻ C,(:ʻ 1Zʻ G('ʻ ;*!&,6ʻ %*ʻ %>,ʻ A:*E!&D,ʻ *-ʻ (AA(6*D!(ʻ #Aʻ ZRSʻ &*%,9ʻ G('ʻ ('ʻ %>,ʻ '%(%!*&ʻ *-ʻ %>,ʻ *B(&ʻ "(DFʻ ,(ʻ-",%ʻ (&6ʻ ' ʻ !&ʻ ('D,:%(!&ʻ B,('.:,ʻ %>,ʻ ?('ʻ,ʻ *-ʻ *A,:(%!*&'ʻ -*:ʻ %>,ʻ B!"!%(:Cʻ D*:Aʻ'ʻ *-ʻ %>!ʻ'ʻ A:*E!&D,ʻ .&!I.,ʻ !&ʻ ("ʻ '!(ʻ !&*:

(AL A(6*D!(&"(&6ʻ (AA(6*D!(ʻ G('ʻ !&ʻ %>,ʻ *B(&ʻ A*G,:ʻ (-%,:ʻ %>,ʻ ,:,D%!*&ʻ *-ʻ %>,ʻ A:*E!&D,'ʻ *-ʻ *&%.'ʻ (&6ʻ C:!(H *-ʻ !%'ʻ (&&,@(%!*&ʻ !&ʻ %>,ʻ ?,)!&&!&)ʻ *-ʻ %>,ʻ :,!)&ʻ *-ʻ !?,:!.ʻ ʻ G>!D>ʻ G('ʻ A:!B(:!"Cʻ *DD('!*&,6ʻ ?Cʻ %>,ʻ (%%,BA%ʻ *-ʻ :B,&!(ʻ%*ʻ:,",(',ʻ!%',"-ʻ-:*Bʻ %>,ʻ *B(&ʻ '.Q,:(!&%Cʻ G,ʻ '>("ʻ >(E,ʻ%*ʻ)!E,ʻ (&ʻ (DD*.&%ʻ!&ʻ %>,ʻ -*"'*G!&)ʻ ',D%!*&ʻ >,ʻ D*.:%ʻ (&6ʻ %>*',ʻ !BB,6!(%,"Cʻ D*&&,D%,6ʻ G!%>ʻ!%ʻ>(6ʻ

!!!ʻ MNʻ ?,D*B,ʻ ,"",&!',6ʻ #!!!ʻ MO9ʻ '*B,G>(%ʻ ('ʻ %>,ʻ ,:B(&ʻ D*.:%'ʻ *-ʻ %>,ʻ ,!)>%,,&%>ʻ D,&%.:Cʻ (6(A%,6ʻ %>,B',"E,'ʻ %*ʻ :,&D>ʻ>(?!%'ʻ ʻ >,ʻ D(A!%("ʻ (,'(:,(ʻ%>,ʻ(&D!,&%ʻ (Q(D(Hʻ "!F,ʻ%>,ʻ >:C)!(&ʻ A(B,(ʻ(&ʻ!&%,:B,6!(%,ʻ '%(%!*&ʻ-*:ʻ%>,ʻ):,(%ʻ%:(--!Dʻ?,%G,,&ʻ%>,ʻ A*:%'ʻ *-ʻ%>,ʻ G,'%ʻ D*('%ʻ(&6ʻ%>,ʻ "(&6'ʻ *-ʻ%>,ʻ .A>:(%,'ʻ (&6ʻ!&ʻ %>,ʻ *B(&ʻA,:!*6ʻ('ʻ'%!"ʻ (%ʻ%>,ʻA:,',&%ʻ6(Cʻ*&,ʻ*-ʻ%>,ʻ B*'%ʻ-"*.:!'>!&)ʻ D*BB,:D!("ʻ D!%!,'ʻ*-ʻ '!(ʻ !&*:ʻG('ʻ(%ʻ%>,ʻ!&'%!)(%!*&ʻ *-ʻ *&(A,!.'ʻ &*% B,:,"Cʻ:,?.!"%ʻ(-%,:ʻ%>,ʻ !%>:(6(%!Dʻ G(:a?.%ʻA:*?(?"Cʻ ("'*ʻ -.:&!'>,6ʻ (%ʻ%>(%ʻ%!B,ʻ G!%>ʻ D!E!Dʻ :!)>%'ʻ (-%,:ʻ%>,ʻ :,,Fʻ%CA,ʻ (AA(6*D!(ʻ!%',"-ʻG('ʻ (%ʻ%>,ʻ ?,)!&&!&)ʻ*-ʻ %>,ʻ !BA,:!("ʻA,:!*6ʻ>(:6"Cʻ B*:,ʻ :,,Fʻ%>(&ʻ :(&6,&?.:)ʻ (&6ʻ *B,:(&!(ʻ .&6,:ʻ :,6,:!DFʻ %>,ʻ :,(%ʻG,:,ʻ :,&D>ʻ >,&ʻ%>,ʻD*.&%:Cʻ?,D(B,ʻ *B(&ʻ!%ʻG('ʻ6!E!6,6ʻ(DD*:6L !&)ʻ%*ʻ%>,ʻ %(%,B,&%'ʻ *-ʻ%>,ʻ D*&%,BA*:(:Cʻ %:(?*ʻ &*% !&%*ʻD!%CJ6!'%:!D%'ʻ?.%ʻ!&%*ʻ%,&ʻA:,-,D%.:,'ʻ*-ʻG>!D>ʻ*&"Cʻ %G*ʻ>(6ʻ%*G&'ʻ%>,ʻ(":,(6CJB,&%!*&,6ʻD(A!%("ʻ(&6ʻ C(&('H



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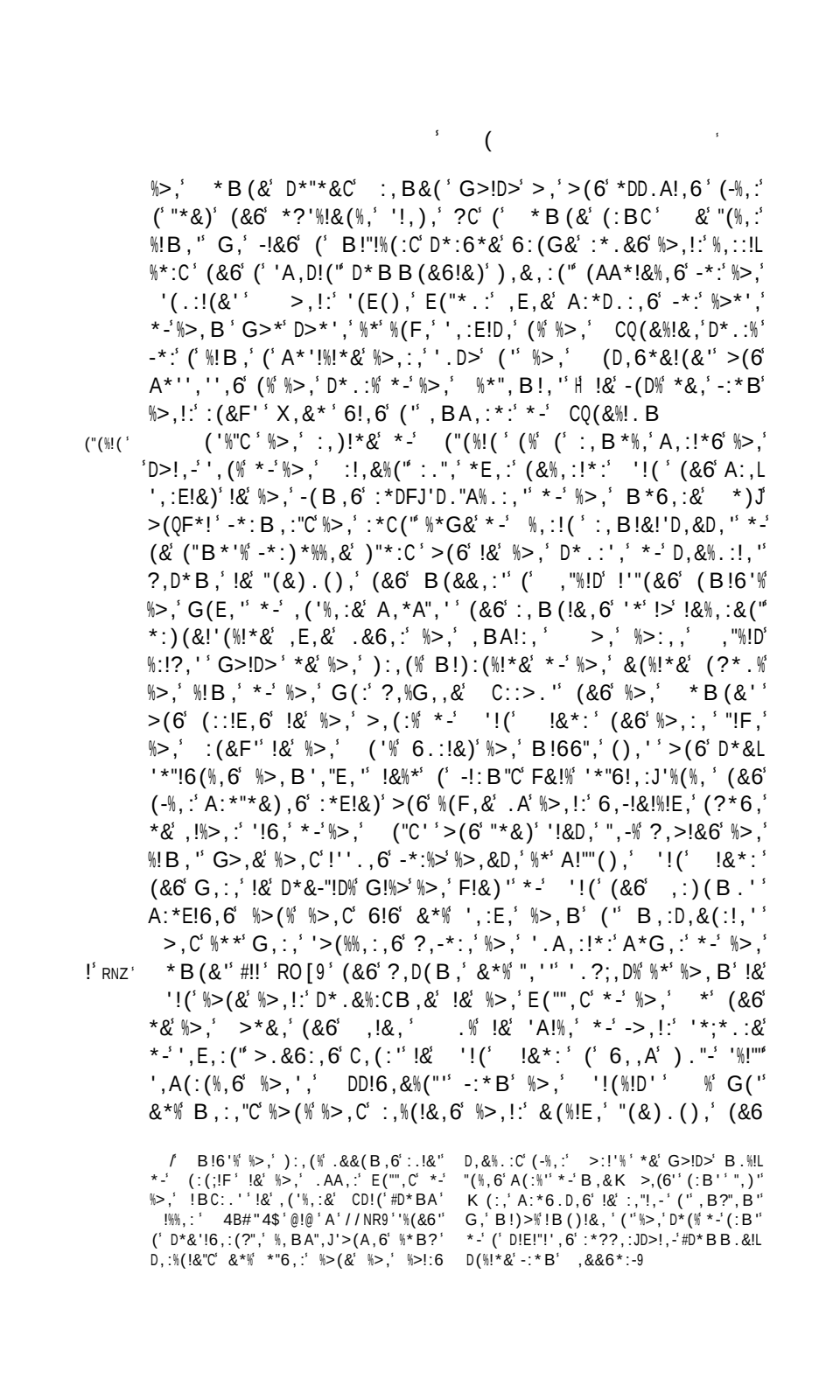

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± >,' != * *' -' ** !' D#*' # D>"!,B(&& ' !' /0OS' A' RM19' D(""'' !%','-',"',G>,:,' Y!,%''2D(" #' ! ' 5 !!' A!' =! ! ' ! '4'#* ' ! F' != *' *$# ' A ' A' RMS9' &*%>,:'6*D.B,&%*-'%>,''(B,'",(),' -:*B' %>,' %!B,'*-' &%!)*&.'' !'')!E,&' !&' :AC',&' $ $" # '!!' R'ZOR' --' *' %G ' *%>,:' *4'(:,'%*'?,'%(F,&' G>!D>':,-,:'%*' (' &(::*G,:'D!%D","%>(&' %>,'A:*E!&D,'' '.D>' ('' %>,' *"6' *&,'*-' %>,' %>!:%,,&' *&!D' D!%!,'' '%>(%' *-' %>,' ,'?!(&'' # (:I.(:6%' &!!&=$ @' !' A' M/19' %>(%'*-'%>,' >:C)!(&''*&'%>,' D*!&'' *-' A(B,(' >,','>(E,'("'*' >(6' %>,!:' B()!'%,:!(" A:,'!6,&%'' (" !&6,,6'%>,:,'>('' :,D,&%"C'?,,&'-*.&6' (' ,'?!(:D>' # (:I.(:6%' +F' (&6' "!F,G!',' %>,' *,'!(&' ,"",&,'' G,:,' .&6,:' (' *&%(:D>'#A' Z[09' ,%'!%'!'' &*%'!BA:*?(?","%>(%'G>,:,'%>,'(:D>J' *&'>!A' !'' &(B,6'%>,'",(),'!'' B*:,' %>(&' >'B,:,'-,'%(" (''*D!(%!*&H %>,

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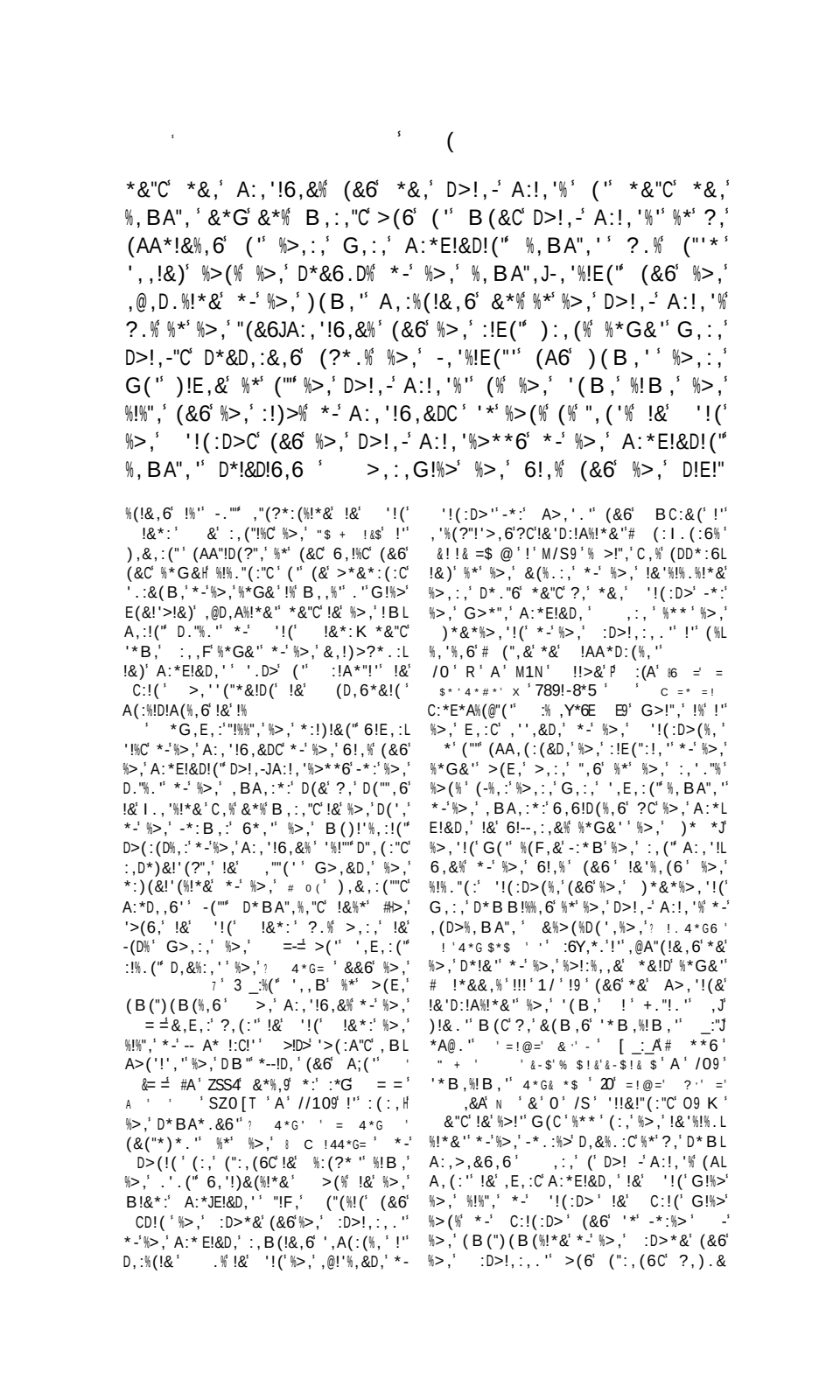
f (D!%.'' " " ' !E' /M' MM' >,' %*G&'G>!D>' A*'','(' %,BA",' 6,6!J D(%,6' ?C' %>,' 6!,%' *-'%>,' A:*E!&D,'#%>,' ==' '! ! ! '#' (Y 9?,(:'' *&%>(%' (DD*.&%%>,'>*&*:(:C' A:,6!D(%,'*-'%>,' T #!BA,:!("9%,BA",JF,,A,:\#E,G !!A*'9H (&6' !-' *&,' *-' %>,B' >('' ',E,:(" %*' '>*G' %>,' &.B?,:' !'' (AA,&6,6' &' %>!'' !&'%!%.%!*&' *&,' B(C' D",(:"C' 6!'J D,B' >*G' %>,' !BA,:!(" G*:'>!A' ?J



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',&%% -' %>!'' >(AA!&,'' *-' "!-,' %>,:,' G(' (?.&6(&D,' !&' '!(' !&*:' .&6,:' %>,' *B(&' !BA,:!('')*E,:&B,&%' T' *' A:*E!&D,' *-' %>,B' ("" U' '(C'' (&' (.%>*:' "!E!&)' !&' BC:&(' .&6,:' %>,' &%*&!&,'' T>('' '*' B(&C' %*G&'' %*' '>*G' ('' *.:'' (&6' &*&,'' '.D>' %*G&'' ('' *.:'' "(:),'% %' >('' %>,' (6E(&%(),'*-' (' D>(:B!&)' D*.&%:C' (' -(E*.:(?","D"!B(%,' E(:!,6' A:*6.D%'' (' A*'!%!*&' !&' %>,' D,&%:,' *-' %>,' ,BA!:,' (')!:6","*-' A,(D,-.'' A,*A",' ("'' :*.&6')**6'*:6,:' :(:!%C' *-' D:!B,'),&%","%:,(%B,&%' *-' '"(E,'' D*&'!6,:(%!*&' (&6

' >,' ,:.'!(' *-%,&' B,&%!*&,6' !&' !&'D:!A%!*&''*-' '!(' !&*:'>(''&*%>!&)' ?.%' %>,' &(B,' !&' D*BB*&' G!%>' %>,' A*"!%!D(" !&'%!%.%!*&' >!%' .A*&' ?C' C'!J' B(D>.'' !&' "A>,'.'' # %:(?*' @!E' !' R/' A' 1S[Ĥ **6' *-$ # ' " + ' '&-$'&$ *$' '> !"!'&' /O9Ĥ!%'' D>(:(D%,:'!&' *B(&'%!B,'' !'' !&6!D(%,6' A(:%"C' ?C' !%:.E!.'' !!' 0' /[Ĥ $' A4 " F' ! 4 !" '+= #'!4' $6# $.' +$"4# ' !$&!& ' & ' $" # ' + $%!' %$ # ! ' 4$4 +!=$ #"&' A(:%"C' ?C' %>,' !&'D:!A%!*&':,D,&%"C-*.&6!&'%>,' CD!(&' %*G&' !6CB(' # ,&&6*:-')'B' $ $' !' N/9' (DD*:6!&)' %*' G>!D>' D*.&D!" (&6' A,*A",' :,'*"E,' (" %>,' "(G' :,L I.!:,'' %*' !&'%!%.%,' (' ,:.'!(' (&6' %*' ,",D%' %*' !%' M[' .",.%(,' (&6' M[' *%>,:' D!%!Q,&'' G>*' %>,&' (AA*!&%' (')CB&('!J (:D>'-*:' %>,' &,G' ,:.'!(' >!'')CBJ &('!(:D>' G>*' B,,%'' .'' ,"',G>,:,' (" G,"" (' %>,' CB&*6,' *-' %>,' ,:.'!(' # ,&(6!,:' 6#!' + "4 $' *-$ ' # "&' A' M/9' (:,' (B*&)' %>,' *--!D,L ?,(:,:'' *-' %>!'' ?*6C' F&*G&' %*' .'' %>,' *&"C' *&,'' D>(:(D%,:!'%!D' *-' !%'' &(%.:,' &("*).'' ?.%' *-' '',''' ,'%!L B(%!*&' (:,' %>,' + $%!' *-' %>,' = ' G>!D>' ("'*' >(E,' %>,!:' *G&')CB&('!J' (:D>'' *' %>,' %G*' *E,:',:'' *-' %>,' A"(D,'' *-')CB&('%!D' ,@,:D!',' -*:' %>,'):*G&J.A' D!%!Q,&'' %>,')CB&('!(:D>'' *-' %>,' A>,?!' -*:B' %>,' D*&%:('%' # ,&(6!,:' A' O/9' *BB*&':,A('%'' (&6' -,'%!E("'' #%*' G>!D>'%>,' CB&*6,'' >('' :,-,:,&D,9' G,:,' *-' D*.:','' &*%' G(&%!&)'A(:%!D."(:"C'!&'%>,' D(','*-'%>,' ,:.'!(' %' G(''&*%' (' A:*E!'!*&' -*:' %>,' A**:'&*:'C,%' (' + $%# ':,',:E,6' -*:' %>,' B.&!D!A(" (:!'%*D:(DC' ?.%' D>(:(D%,:!'%!D' -*:' %>,' B*6,' *-' D!E!'' !&%,:D*.:',' (B*&)' %>,' :,,F'' G!%>' G>*B' %>,')CB&('!.B' G(' &,(:"C' G>(%' %>,' D!%!Q,&'' (''.B?"CJ:**B'' (:,' !&'* :'B("'' %*G&'

)**6G!"" -:*B %>, :.",:' U '!(' G(' D("",6 (' G, >(E, (":,(6C '(!6 %>, A:*E!&D,*-%>, -!E, >.&6:,6 %*G&'H (&6 !- %>, (:!6 !&%,:!*: !& A(:% -!%%,6 *&"C -*:' A('%.:, *- >:C)!(CD(*&!(("(%!((&6 (AA(6*D!(G(' ,E,& (% %>(% %!B,'?.% %>!&"C A,*A",6 %>, :,'% *- %>, D*('% G(' &*% -(: ?,>!&6 '!(>, ,&6.:!&) A:*'A,:!%C *- %>, :,)!*&' D(A(?", *- D."%!E(%!*& !& '!(!&*:' 6!6 &*% ,@%,&6 B,:,"C %*' %>, D!%!,' *- !"".'%:!*.' &(B, ' .D> (' A>,'.' BC:&((*6!D,(A(B,(H G>,:,E,:' (D*:&,:' *- %>, D*.&%:C &,)",D%,6 .&6,:' %>, 6,'*"(%!*& *- %>, -!-%,,& >.&6:,6 C,(:' G>!D> ',A(:(%, .' -:*B %>(% %!B, !' *A,&,6 .A %*' !&E,'%!)(%!*& %>,:,%>, -!:'% (&6 %>, B*'% A*G,:-.'" -,,"!&)' !' %>(% *-('%*&!'>B,&% *&, B!)>% ("B*'% '(C *-'>(B, (% %>, D*&%:('% *- %>, G:,%D>,6 (&6 A!%!-."A:,',&% G!%> %>, >(AA!&,'' (&6 'A",&6*.:' *-' %>, A('% *B(& (),

&(',D".6,6 B*.&%(!&J%*A &*% -(:-:*B %>, CD!(> :().'J D*('% G>,:, (DD*:6!&) %*' %>, :,,F -(?", 6G,"% %>, !6CB(' >!B(,:('"(C %>, (&D!,&% :().' A:*?(?"C ?.!"% *&"C *- ?,(B' (&6 D"(C %!","' (&6 >(E!&) -*:' %>(% :,('*& &*' %:(D, *- !% ",-% ,@D,A%!&) %>, CD"*A!(& -*:%:,''JG("" (% %>, -**% *- %>, >!"" ,"*G %>, '.BB!% 'A:,(6 (' A",('(&% -,:%!",'E("",C G!%> -:,'> "A!&,' (!:' (&6 '*.%>,:& E,),%(L %!*&' .::*.&6,6 ?C B*.&%(!&'' :!D> !& G**6' (&6)(B, >,& .&6,:' %>, ,BA,:*:' "(.6!.' CD!('?,D(B,' (' A:*L E!&D,' %>, *B(&)*E,:&B,&% %:(&'-,::,6 %>, B*.&%(!&J %*G&K %>,'T):,,& :().'U *- *:(D,K %*' %>!' A"(!&H !& %>, B(:F,%JA"(D,' *- %>, &,G %*G& !6CB(' %>, :,B(!&' '%!"" '%(&6 *- %>, %,%:('%C", %,BA", %>,& 6,6!D(%,6 %*' %>, ,BA,:*:' (&6 *- (' '%(%,"C D*"*&&(6,' G>!D> (' &(%!E,' *- %>, A"(D,' G>*'>(6 (DI.!:,6 B,(&'' (' (' A>C'!D!(& ?.!"% !& >!'' ,(:"C >*B, %(%.,'' *-' %>, ,BA,:*:'' (&6 *-' 6,',:E!&) -,""*GJD!%!Q,&' (6*:&,6 %>, B(:F,%H %>,:,' G,:,' !& %>, %*G& (' %,BA",' %*' !%'' A:*%,D%!&))*6' :%,B!'' (&6 A*""*' ?(%>'')CB&('%!D !&'%!%.%!*&' =G=G"!F -*:' %>,' *"6,:' (' -*:' %>,' C*.&),:' D!%!Q,&'' H -:*B' %>,')(%,'' ("*&)' %>,' B(!& :*(6' G>!D> ",6 '%,,A"C 6*G& %>,' B*.&%(!& '!6,' %*' %>, >(:?*.:' ("(?(%!(' %>,:,' '%:,%D>,6' *& ?*%>' '!6,'' :*G''*- '%*&,'',A."D>:(" B*&.B,&%'' B*:,' '%(%,"C (&6 B*:,' D*'%"C

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:,B*%,"C‘E!,‘G!%>‘ ‘!(‘ !&‘ %>,‘ &.B?,:‘ *-‘ B!&%"‘ (&6‘%>,‘
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‘6.?%‘%>!"‘ B,:)!&)‘*-‘("“‘ !&%,:,'%"‘ !&‘%>,‘A,%%C‘ ,-,D%"'*-‘
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"(:),'',"‘*-'%>,‘%*G&JD>,'%'*:‘*-‘B,&‘*-‘G,("%>‘%*‘-:,,‘*!"‘
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,@!'%‘("?,%G,,&‘%*G&‘(&6‘%*G&#A‘ZRO9‘'*‘!&‘,E,:C‘%*G&‘
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)*E,:&B,&%‘!&‘ '!(‘ !&*:‘6(:,"‘&*%‘%*‘!&%:*6.D,‘%>,‘
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>(6‘-!&(&D!(""C‘(--,D%,6‘-,G‘A:*E!&D,"‘'*‘',E,:,"C‘('%>,',‘
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D*BB.&!%!,"‘(&6‘*-‘!&6!E!6.("'‘%>,:,‘%>(% .).'%.'‘
:,'*:%,6‘%*‘%>,‘,@%:,B,‘,@A,6!,&%‘*-‘'%:!F!&)‘*--‘("“
D"(!B"‘*-‘6,?%H ("“%>,‘ '!(%!D'‘G!%>‘%>,‘,@D,A%!*&‘*-‘
%>,‘ >*6!(&'‘B(6,‘.',‘*-‘%>!"‘6(&),:*.'‘:,B,6C‘ .%‘
%>,‘A,(D,-.“)*E,:&B,&%‘G>!D>‘()(!&',%‘!&‘B(6,‘.A‘-*:‘
B.D>‘ *%‘,E,:CG>,:,K %>,‘!'"(&6"‘*-‘%>,‘ ,),(&‘ ,(

>!'' A:*'A,:!%C' *-' '!(' !&*:' G('' &*%' %>,' G*:F' *-' (')*E,:&B,&%' *-' '.A,:!*:' !&'!)>%' (&6' ,&,:),%!D' (D%!E!%C >,' A*"!%!D(" !&'%!%.%!*&' '%>,' !&D!%,B,&%'' *-'%:(6,' (&6'D*BL B,:D,' %>,' !&!%!(%!E,' !&' "!%,:(%.:,' (&6' (:%' ?,"*&)' %>:*.)>L *.%' '!(' !&*:' %*' %>,' *"6' -:,,' %*G&'' *:' %*' %>,' %%("!6' >(%' %>,' *B(&')*E,:&B,&%')(E,' %*' %>,' "(&6' G('' ,'',&%!(""C' %>,' A,:B(&,&D,' *-' ('%(%,' *-' A,(D,' %>,' %*",:(L %!*&' *-' !&G(:6' A:*'A,:!%C' %>,' (?',&D,' *-' %>(%')*E,:&L !&)' G!'6*B' G>!D>' :,)(:6'' ,E,:C' '*.&6' A(!:' *-' (:B'' (&6' ,E,:C' '(E,6' A!,D,' *-' B*&,C' ('' :!)>%-.""C' '.?',:E!,&%' %*' !%'' !BB,6!(%,' (!B'K &,)(%!E,' E!:%.,'' *-' A,:'*&(),'' -(:' -:*B' A:*B!&,&%' ?.% *-%,&' B*:,' D*&6.D!E,' %*' %>,' D*BB*&' G,("%>(&'%>,'):,(%6,,6'' *-'%>,'','-JD*&'%!%.%,6')(:6!(&'' *-' B(&F!&6

>,' A:*'A,:!%C' *-' '!(' !&*:' G('' !&' ?,(.%!-.'' ,I.!J A*!','6,A,&6,&%' (' B.D>' *&' ():!D."%.:,' (' *&' !&6.'%:C' (&6' D*BB,:D,' ,'-(E*.:'' *-' &(%.:,' G,:,' ?,'%*G,6' !&' :!D>,'%' B,('.:,' ,'A,D!(""C' *&' %>,' :,)!*&'' *-' %>,' D*('%H (&6' %>,:,' (:,' B(&C' ,E!6,&D,'' G!%>' >*G' "(?*:!*.'' 6!"!L),&D,' ,E,&' .&6,:' B*:,' 6!--!D."%' D!:D.B'%(&D,'' ,E,:C' (%("' .',(?",' A!,D,' *-'):*.&6' G('' %.:&,6'%*' (DD*.&%' $%' !&%>,' :*DFC' E("",C' *-' %>,' .:CB,6*&' !&' (BA>C"!(' ?C' %>,' D!%!Q,&'' *-' ,")(' >,' A:*6.D%'' *-' %>,' !&6.'%:C' *-' '!(' !&*:' (:,' %**' &.B,:*.'' (&6' %**' B(&!-*"6' %*' ?,' 6G,"%' .A*&' !&' 6,%(!" G,' B(C' B,&%!*&' %>(%' %>,' !BB,&',' A('J

A:*D.:(%*:' # ' ') ' !!!' ZS1H' *-' E&' O19' .%',E,&'!&' %>,' D(',' *-'%>,' :*(6" D*&'%:.D%,6' !&' %>,' ',&(%*:!("" A:*E!&D,'' *-' '!(' (&6' CA:.'' %>,' ',&(%,'!" &,E,:' &(B,6' (&6' %>,' '(B,' B(C' ?,' (''.B,6' -*:' %>,B' &' %>,' %>!:6'D,&%.:C',:,'('',E,:CG>,:,'%>,' D*&'%:.D%!*&' ,E,&' *-' %>,' !BA,:!("" >!)>G(C'' G("%:(&'-,::,6'%*' %>,' D*BL B.&,'' # BC:&(P' ' ') ' !!!' SN/'H >C(%!:(' # '4$+!'' $ '!' ''*!'H (A>*''' ' ') ' !!!' R/O9

' >,' >:!'%!(&'' *-' %>,' '!%%","'%*G&' *-' *:CD.'' !&' %>,' *.)>' !''!D!('G,:,' G*&%' D*&%:(:C'%*' %>,'),&,:("D.'%*B' %*' (AA,&6',)."(:"C'!&' %>,!:' %*B?J!&L 'D:!A%!*&'' %>,' '%(%!*&' !&' "!-,' &' %>,' ,A!%(A>'' :,D*E,:,6' %>,:,' ?C' (&)"*!'' (&6' :,D,&%"C' ?C' .D>,'&,' A # ' 4$

+ ' $ ' E!!' RZ['' --9' %>,:,' (:,' -*.&6' (' G:!%,:' #C*:6A%*'9' (' G!&,J 6,(",:' A ! * F' %G*' *!"J6,(",:'' # ,* D!Y!9h9' ('):,,&J):*D,:' #Y(@(J :*::!!Y!;'9' ('-:.!%J6,(",:' #6 :(!A*!:D!Y&'9' %G*':,%(!" 6,(",:'' #2D6G Y*'9'-!E,')*"6L 'B!%>'' #*6A6A!*'' %>:!D,' @A.!:6@.*'' %G!D,9'*&,'*-'G>*B'!'' ("'*'A:,'?C%,:' -*.:' D*AA,:'B!%>'' #@(Y@6 > :*'' *&D,' Y(Y D '%>:!D,9'%G*'!&'%:.B,&%JB(F,:'' AX* !K *M* F' -!E,' A*%%,:'' # DA*2:,%-'9' *-'G>!D>' *&,' !'' 6,'!)&(%,6' (''G*:FJ')!E,:' A$*' - F' (&*%>,:' !'' (' %>,' '(B,' %!B,' A:,'?C%,:' ('D"*%>,'J6,(",:' #!A* ! %:P1YN9'9' %G*' "!&,&'J 6,(",:'' AO = O &F'%>:,',G,(E,:'' AJ4 = ! JF' ('G*:F,:'!&'G**'' A*& =*' F' %G*''>*,L B(F,:'' A C'4* e' #D(Y "2 *'9' (''F!&L &,:' A= *4M* 6*.?%","'':-*:' = *XMK

1* ‘ (‘

%.:,’‘ *-‘%>,‘ !&%,:!*:‘ G!%>‘ %> !:‘-"*DF’‘ *-‘ ‘>,,A‘ (&6‘)*(%’‘ B(6,‘ ‘!)‘ !&*:‘ %>,‘ >,(6I.(:%,:’‘ *-‘G**"",&‘ B(&.-(DL %.:,’‘ (&6‘ *-‘G,(E!&)‘),&,:(""CK !%‘ ‘.-!!D,’‘ %*‘ :,D("‘ %>,‘ !",’!(&‘ (&6‘ %>,‘ ("(%!(&‘ %>(%‘ !’‘ %>,‘ &)*:(‘G**"‘ %>,‘ %%("!D‘)*"6‘J‘,B?:*!6,:!,’‘ %>,‘ D"*%>’‘ A:,A(:,6‘ !&‘ %>,‘ G*:F'>*A’‘ *-‘ >:C)!(&‘ (*6!D,(‘(-%,:‘%>,‘ ,:E!(&‘ %>(%‘ !‘ %>,‘ ",B!'>‘ '%C",‘ %‘!‘G,""JF&*G&‘ %>(%‘ (&‘ !&'.::,D%!*&‘ >(6‘ ("B*'%‘?:*F,&‘*.%‘!&‘ A>,'.’‘?,D(.',‘%>,‘)*"6'B!%>’‘ 6:,(6,6‘!&;.:C‘%*‘%>,!:‘'(",‘*-‘'(D:,6‘!B(),’‘-:*B‘%>,‘&,G‘ >:!'%!(&‘-(!%>J‘ &‘ >!"(6,"A>!(‘(‘D*&'!6,:(?",‘%*G&‘*-‘ C6!(‘G,‘F&*G‘%>,‘&(B,’‘*-‘%G*‘*.%‘*-‘%>,‘ ',E,&‘ 6!'%:!D%'P‘%>,C‘(:,‘%>*',‘*-‘%>,‘G**"JG,(E,:’‘ (&6‘%>,‘ '>*,B(F,:’‘ :*?(?"C‘%>,:,‘!’‘>,:,‘?:*.)>%‘%*‘ "!)>%‘ G>(%‘!&‘%>,‘D('‘*-‘%>,‘*%>,:‘%*G&’‘!’‘>!66,&‘ &6,:‘*"6,:‘ (&6‘B*:,‘),&%,,"&(B,’‘%>(%‘%>,‘B*:,‘D*&'!6,:(?",‘%*G&’‘ *-‘ '!(‘!&D".6,6‘%>:*.)>*.%‘&*%‘B,:,"C‘(‘B."%!%.6,‘*-‘ (:%!'(&’‘?.%‘("'*‘(‘&.B,:*.’‘B(&.-(D%.:!&)‘A*A."(%!*& >,‘B*&,CJ6,("!&)‘(&6‘%:(--!D‘G,:,‘!&‘ '!(‘ !&*:‘ 6,A,&6,&%‘D>!,-"C‘*&‘!%’‘*G&‘A:*6.D%'‘ >,‘):,(%‘-*:,!)&‘ !BA*:%’‘(&6‘,@A*:%’‘*-‘ C:!(‘(&6‘)CA%‘G,:,‘>,:,‘!&‘%>,‘ B(!&‘,@D".6,6‘%>*.)>‘-:*B‘%>,‘,('%,:&‘"(&6’‘ (:!*.’‘ (:%!D",’‘G,:,‘!&%:*6.D,6‘!&%*‘ '!(‘ !&*:‘$%L‘(‘D*&'!6,:J‘ (?",‘&.B?,:‘*-‘'"(E,’‘%>:*.)>‘%>,‘ ("(%!(&‘%:(6,:’‘ .%‘ !-‘%>,‘ *B(&‘B,:D>(&%’‘G,:,‘%*‘?,‘-*.&6‘>,:,‘(AA(:,&%"C‘ !&‘,E,:C‘"(:),‘(&6‘'B("‘%*G&‘,E,&‘(%‘A"(D,’‘"!F,‘"!.B‘ (&6‘ ''.’‘!&‘ C'!(‘ :CB&,''.’‘(&6‘ :(!(&*A*"!’‘!&‘ >:C)!(‘!&‘'.D>‘&.B?,:’‘%>(%‘%>,!:‘('*D!(%!*&’‘G,:,‘!&‘%>,‘ >(?!%‘*-‘%(F!&)‘A(:%‘("*&)‘G!%>‘%>,‘%*G&‘’‘?.:),'',’‘!&‘ A.?"!D‘(D%'H‘!-‘!&‘ !,:(A*"!’‘!&‘%>,‘!&%,:!*:‘*-‘ >:C)!(‘(‘ B(&.-(D%.:,:‘A*'!! =F‘D(.',6‘!%‘%*‘?,‘!&'D:!?,6‘*&‘>!’‘ %*B?‘%>(%‘>,‘>(6‘!&‘>!’‘"!-,%!B,’‘'(!",6‘',E,&%CJ%G*‘%!B,’‘ :*.&6‘(A,‘(",(‘%*‘%("C‘(&6‘(‘ *B(&‘A*,%6,'D:!?,’‘ %>,‘B,:D>(&%‘*-‘%>,‘D(A!%("G>*‘>('%,&’‘%*‘%>,‘A*:%‘!&

$ F‘(‘B(:!&,:‘#@(-,Y;2A'9‘(‘B!6L G!-,‘N!*=H‘-.:%>,:‘(‘;*!&%*B?‘ *-'%>,‘>!)>"C‘:,A.%(?",‘B*&,CJD>(&),:‘ #_&# #:.,(* X=‘$'!A X5;‘:A(::,J -! G:9‘ .D>‘ (‘%>,’"**F‘*-‘%>!&)‘’ %>,:,‘!&‘%>,’-!-%>‘(&6‘'!@%>‘D,&%.:!,’ ‘ >!’‘%:(--!D‘(%%,'%,6‘-*:‘%>,’-*.:%> D,&%.:C‘# BB!(&.’‘@@!!‘N‘O‘H‘"(.J 6!(&.’‘!&‘ .%:*A‘!’ MOg‘!’‘?,C*&6‘ 6*.?%‘*"6,:’ -‘(&*%>,:‘&(%.:,‘!’‘ %>,’-(D%’‘%>(%’(‘’ >!"*'%:(%.‘’‘'%(%,’‘ A;&!‘ * 5‘E!!!‘N‘/R9‘%>,’&*&J :,,F‘!&>(?!%(&%’‘*-‘ >:C)!(‘’*"6‘ %>,!:‘D>!"6:,&‘%*‘%>,’‘"(E,J6,(",:’

:6,:' &%' %*' ",%' >!'' ?.'!&,''J-:!,&6' -:*B' !?C:('&*%' -(:' 6!'%(&%' -:*B' !,:(A*"!'' -(""' !&%*' %>,' >(&6'' *-' :!E("'' %>,:,' !'' %>.'' *A,&,6' .A' (')"!BA',' !&%*' (' '%!::!&)' B(&.L -(D%.:!&)' >&6' B,:D(&%!",' "!-,' &*%' B,:,"C' (%' %>,' ',(A*:%'' (&).(),' ("'*' %,'%!-!,'' %*' %>,' D*&'%(&%' !&%,:D*.:',' G!%>' %("CH (B*&)' %>,' (%!&' G*:6'' %>(%' ?,D(B,' D.::,&%' !&' '!(' !&*:' &*%' (',G'A:*D,,6' -:*B' '.D>' !&%,:D*.:',' (''!&6,,6' !&' A>,'.'' ,E,&' %>,').!"6' *-' %>,' G**"JG,(E,:''!E,'' !%',"-' (' (%!&' &(B, ' ,(D>,:'' *-' ("'' '*:%'' (&6' A>C'!D!(&'' D(B,' ,'A,D!("'C' -:*B' %>!'' I.(:%,:' %*' %("C' (&6' %>,' *%>,:' "(&6'' *-' %>,' (%!&' %*&).,' (&6' &*%' B,:,"C')(!&,6' *-%,&' D*&'!6,:(?",' G,("%>'?.%' ("'*' ?:*.)>%' !%' ?(DF' %*' %>,!:' &(%!E,' A"(D,H (B*&)' %>*',' %*' G>*B' %>,' %*G&'' *-' '!(' !&*:' *G,' ?.!"6!&)'' *:' ,&6*GB,&%'' %>,' A>C'!D!(&'' G>*' >(6' ?,D*B,' :!D>3 (&6' "!%,:(%!' *DD.AC' (' A:*B!&,&%' A*'!%!*&' ('%"C' %>,' ,B!):(%!*&' *-' %>,'):,(%' -(B!"!,'' %*' %("C' (--,D%,6' '!(' !&*:' *","'' (&6' "(%,:' %>(&' %>,' ,'%H !%' G(' ,('!,:'-*:'A,*A",' -:*&%' !,&&(' (&6' (:?*' %*' %:(&'A"(&%' %>,B,"E,'' %*' %>,' D(A!%(''' *-' %>,' ,BA!:,' %>(&' -:*B' %>,'

%' -@$*'! !' ·'O!*!* =' # **6' *-$ #' D!%C' &'S9' &' %>,'!&'D:!AJ' !*&'' *-' *:CD.''#A'ZMO9' (%!&'&(B,'' !-' (:%!'(&'' (:,' -:,I.,&%' >,' '%(!:' '' D("",6' '* 4 ' !&' %>,' >:C)!(&' !&J' !D!!A%!*&'' '2' ' ZO[[' ZO[R' ' &,'*-'%>,',','!'' Y,&*A>*&'*&'*-' ,:(D"!%.'' *-' *'' G,"'' F&*G&'-:*B' (D!%.'' A "'' '@!!'1/'1N9' (&6' "!&C' ' ('@@!@' 'N' (&6'-:*B' (''',:!,'' *-' B*&.B,&%'' *-' >!'' &(%!E,'A"(D,'A # ' $'+! ' $ 'E'S109' '' A>C'!D!(&J' !&J*:6!&(%C'A *G .* 'G>!D>'%!%",'-!%'%' *DD.:'' >,:,g %*' %>,' ,BA,:*:' >,' (DL I.!:,6 '.D>' !&-".,&D,' %>(%' >,' D*BL ?!&,6' G!%>' >!'' B,6!D(" (D%!E!%C' %>,' A*'!%!*&' *-' !BA,:!("D(?!&,%J',D:,%(:C' -*:' :,,F' D*::,'A*&6,&D,' A = ' 4 '' .C * ' *&*4 !'H D*BA' .!J' 6('' - ' # ') * + ,) - .' (&6' >,'A:*D.:,6'&*%B,:,"C-*:'>!'' ?:*%>,:' (&6' .&D","%>,' *B(&'-:(&D>!',' (&6' A*'%'' (" *--!D,:'' *-' ,I.,'%:!(&' :(&F' (&6'-*:' >!B','-'?,'!6,'' %>,' >*:','*-' (' F&!)>%' (&6' %>,' :(&F *-'*--!D,:'%>,' 6,D*:(%!*&' *-'%>,')*"6,&D>(A",%' (&6' %>,'A,(:' *&' *DD('!*&' *-' %>,'%:!.BA>' *E,:' :!%(!&' ?.%' ("'*' -*:' >!'' &(%!E,

A"(D,' -%,,6*B' -:*B' %(@(%!*&' !'' %*B?' '%(&6'' *&' %>,'!'"(&6' (&6' >!''):(%,-.'' D*.&%:CB,&' ',%' .A' '%(%.,'' %*' >!B' (&6' %*'>!'' (&6' '%:.DF' !&' B,B*:C' *-' >!B' D*!&*'' G!%>' >!'' ,--!)C' ,'!%' !'' G>*!'' ("",),6' %*' >(E,'A.%' (&',&6' %*' "(.6!.'' G>,&' 6,(6' J '!DF' ?C' -.:%>,:'A*!'*&!&)' (&6' (DD*:6!&)"C' (''' ,I.("C' (".(?",'%*'>!B' (&6' %*'>!'' 5.DJ' D,''*:' >,' !'' %,:B,6' *&' >!'' B*&.L B,&%'' &*%' B,:,"C' (''.'.("' T -:!,&6' *-' %>,',BA,:*:'U' # %^**J,8 (_: !'9' ?.%' 'A,D!("C' -:!,&6' *-' "(.6!.'' # Y*J' C! &F (&6' *-' ,:*' NM*O = *M!=H '*' (DD*:6!&)' %*' D,:%(!&' :,'%*:(%!*&9' !'' ?:*%>,:' G>*B' >,' -*""*G,6' !&' %>!''A*'!%!*&'6:,G'('(''(":C'*-'M[[[[['','%,:D '' #Hf'***9' ?.%' ('' .:,6' %>,',BA,:*:' %>(%' >,' >(6' *&"C'%(F,&' %>,' A*'!%!*&' %*' A",('>!B' ('' >!'' %*G&J' A:(D%!D,' ?:*.)>%' !&' %*' >!B' !** ***' ','%,:D,'' B*:,' &'A!%,'*-'%>,',&*:L B*.'' '.B'' G>!D>' %>,' ?:*%>,:'' >(6' ,@A,&6,6' *&' (A","!&'A(:%!D."(:'('' G,"'' (''*&' *'' %>,C'",-% ?,>!&6' (&' ,'%(%,' *-' Z[[[[[[[' ','%,:D,''

:,,F %*G&'H &*:' G(' %>,)*E,:&B,&% !& %>, ,(:"!,:' A,:!*6 I.!%, !&D"!&,6 %* ?:!&) %>, B.&!D!A(" *- B(:F -:*B '!(!&*:'%* %>, D*.:% (&6 %* !&%:*6.D, %>,B !&%* %>, *B(& (:!'%*D:(DC

%!%,:(:C (D%!E!%C

-G, ",(E, *.% *-E!,G %>, B(:E,""*.' A,:!*6 *- ,(:"C ?"**B !& G>!D> %>, *&!D ,A*' (&6 %>, ,*"!D "C:!D A*,%:C %>, ?,)!:%&!&)' *- >!'%*:!D(D*BA*'!%!*& (&6 *- A>!"*'*A>C *- A"('%!D (:% (&6 *- A(!&%!&) >(6 %>,!: :!', *& %>,', '>*:,' !& 'D!,&D, (' !& %>, A:(D%!D, *- (:% %>,):,(% (), *- '!(!A*: G(' %>(% *- %>, %%("!6' G>!D> -(!%>-.""C D>,:!'>,6 %>, B,B*:C *- %>(% '%!""):,(%,: ,A*D> - BC:&(' '>*G,6 6!E!&, >*&*.:' %* !%' D!%!Q,& *B,: '%:.DF D*!&' -*:' >!B (&6 &(B,6 %>,B (-%,:' >!B %>,:, G(' %>.' ,@A:,'',6 %>, -,,"!&) G>!D> 6*B!&(%,6 ("" *&!(' (&6 ("" '!(!&*: %>(% 6!E!&, (:% >(6 D*B, 6*G&%* ,(:%> !& ,"",('),&,:(""C (&6 !& *&!(' !& A(:%!D."(:

!"'%:(DJ %!*&

G ,(:"C (&6 % G>(% ,@%,&% ,",B,&%(:C !&'%:.D%!*& G(' (& *?;,D% *- A.?"!D D(:, !& %>,', :,)!*&' !' D",(:"C '>*G& ?C ('6,D:,, *-%>, %*G& ,*' !& C6!(D*&D,:&!&) !% DD*:6!&) %* %>!' (-%,: %>,)!-% *- D(A!%(?C (:!D> D!%!Q,& >(6 A:*E!6,6 %>, %*G& G!%> B,(&' %>,:,G(' %*?, !&'%!%.%,6 !&-.%.:,'("*&)'!6, *-%>,'!&'A,D%*:'*-)CB&('%!D' NM'==!!4* FMMF ("'* %>, >*&*:(:C *--!D, *- ('D>**"J!&L 'A,D%*:'A ! = F .:%>,: %>,:,'G,:, %*?, (AA*!&%,6 %>:,, A(!6 %,(D>,:' *- G:!%!&) G!%> '("(:!,' (DD*:6!&) %* %>, %>:,, D"('', :,'A,D%!E,"C *- 1** * (&6 M[[' 6:(D>B(, !& *:6,: %>(% ("" %>, -:,,?*C' (&6)!:"' B!)>% ?, !&'%:.D%,6 !& G:!%!&)'H "!F,G!', %G*)CB&('%!D B('%,:' ,(D> G!%> (''("(:C *- M[[' 6:(D>B(,H (%,(D>,: *- B.'!D G!%> (''("(:C *- N[[' 6:(D>B(, G>* '>*."6 !&'%:.D% %>, ?*C' *- %>, "('% %G* C,(:' (% 'D>** (&6 %>, C*.%>' %>(% >(6",-% 'D>** !& A"(C!&) %>, ".%, (&6 %>, D!%>(:('H (?*@L !&) B('%,: G!%> Z[[' 6:(D>B(, (&6 (%,(D>,: -*: (:D>,:C (&6 %>:*G!&) *- %>, 'A,(: G!%> (A(C *- RM[[' 6:(D>B(, >, %,(D>,:' *- G:!%!&) (&6 B.'D (:, %* >*"6 (A.?"!D ,@(B!&(%!*& *- %>, 'D>*"(:' (&&.(""C !& %>, %*G&J>("' .D> G(' %>, '!(!&*: *-%>, %!B, *-%>, %%("!6'H ?.%

/ >,' 6*D.B,&% !')!E,& ?C !%%,&?,:),:' &' ZSO %%(". ' B(6,'(' '!B!"(:',&6*GB,&% !& ,"A>! N # ' 4$'+ ' $ 'E' /M'N9

%>, *B(&:,A.?"!D 6!6 &*% D*&%!&.,%>,!:G*:F %6!6 &*% D(.',!%" E!D%*:!,": *E,:%>, ("(%!(&" %*' ?,' !B B*:L %("!',6 ?C %>,' D>!',"' (&6 %>,' ,:)(B,&,' "!?:(:C G,&% '>*:%"C ?,-*:,'%>,'?(%%",'*- D%!.B'%* ",@(&6:!('H B(&C *-'%>,'?,'%),:B" A,:!'>,6 !& %>,'6,E('%(%!*& *-'%>,' !%>J :(6(%!D (&6 %>,' D!E!"G(:' % G(" *&"C !& %>,' %!B,'*-' %>,', BA!:,'%>(% %>,'D(:,'*-'(:%' (&6 (?*E,'("" *-'"!%,:(%.:,' :,E!E,6 (% ",('% *.%G(:6"C G!%>' %>,' A:*'A,:!%C *-' '!(' !&*:' *' (' A:!B(DC A:*A,:'.D>' (" G(" A*'',',6 ?C %>,&" (" (' .&!E,:'!%CJ%*G&'?C ",@(&6:!('!& %>,' 'A>,:,' *-'D!,&%!-!D :,',(:D>' (&6 ?C %>,'-:!E*"*." D(A!%(" *- C:!(' -*:'%>,'6:(B(' (&6 %>,' ! $&' &*&,'*-'%>,' &.B,:*." D!%!,"' *- '!(' !&*:'D*."6 "(C D"(!B' !& (&C 6!:,D%!*& G>(%,E,:'H ?.%),&,:(" D."%.:,' G(" A:*?(?"C &*G>,:,' B*:,' G!6,"C 6!--.',6 (&6 B*:,'!&-",&%!("' % B.'% >(E,' ?,,&' E,:C ,(:"C %>,'D.'%*B' !& '!(' %*'):(&% %*' %,(D>,:" (&6 A>C'!L D!(&" ,@,BA%!*&-:*B' %>,' D!E!D' *--!D," (&6 -.&D%!*&" %>(% !&E*"E,6 ,@A,&','H %*' %>!" A:*E!&D,'G(" 6!:,D%,6 %>,',6!D% *-'%>,', BA,:*: !." #A ZRO9 G>!D>' !& *:6,:' %*' ',% "!B!%" %*' (& ,@,BA%!*&H %>(% G(' ,E!6,&%"C E,:C ?.:6,&'*B,' -*:'%>,'D!%C -!&(&D,''A:,'D:!?," B(@!B(" &.B?,:" -*:' !%P $%' (""*G" %*G&" *-'%>,',-!:'% D"('" %*'):(&% %>!" !B B.&!%C %*' %>,',@%,&% *-'%,& A>C'!D!(&'' -!E,'!&'%:.D%*:" !& :>,%*:!D' (&6 -!E,'!&):(B B(:

>,'A*'!%!*& *- '!(' !&*:' (" *DD.AC!&)'%>,'-!:'%:(&F 66:,'',"' !& %>,'"!%,:(:C G*:"6 *-'%>,'!BA,:!("A,:!*6 G(" ?(',6 *& '*A %"' %>,' 'C'%,B *-'%>,' :>,%*:'' *:' (DD*:6!&)'%*' %>,',@A:,''!*& "(%,:!& .',' %>,'"*A>!'%" *-'%>!",A*D>JK (''C'%,B G>!D>G,' B*6,:&" D(&&*% ,('!"C :,("!', >,' A"(D,' *-(.%>*:'>!A G>!D> A:,%%C &,(:"C D,(',6 %*' >(E,' (&C '!)&!-!D(&D,' G(" %(F,& ?C %>,'A.?"!D 6!'D*.:',' '*B,G>(% *-'%>,' &(%.:,' *-' *.:' B*6,:& .&!E,:'!%C (&6 (D(6,B!D (66:,'',' ',%,:&(""C A:*6.D!&)'!%',"-'(&,G (&6 A:,',:E,6 *&"C ?C G(C *-',@D,AL %!*& *&D,'>,(:6 (&6 %("F,6 *-' (&6 %>,& -*:',E,:-*:)*%%,& >,' D*&%,&%" G,:,'-.:&!'>,6 -:,I.,&%"C ?C %>,' *DD('!*& *-'%>,'?!:%>6(C *-'%>,', BA,:*:'%>,'(::!E(" *-'%>,')*E,:&*:' *:' (&C (&("*)*." ,E,&%' A.?"!D *:'A:!E(%,'H '%!"" B*:,' -:,L I.,&%"C G!%>*.% (&C *DD('!*& %>,C %("F,6 (% "(:),' *& ,E,:C%>!&)' G>!D> G(" &*% A:(D%!D(" (&6 &*% !&'%:.D%!E,

Z1S ('

>,' A*"!%!D('" (66:,''' >(6' &*' ,@!'%,&D,'-*:' %>!'' (),' (%' (""' &*%' ,E,&' !&' %>,' *B(&' ',&(%,' >,'-*:,&'!D' 'A,,D>' G('' &*' "*&),:' -*:' %>,' :,,F'' %>,')*("' *-' *:(%*:C' ?.%' '%**6' ("*&)'!6,' *-' %>,' 'A,,D>'-*:' 'A,(F!&) '' '(F,' ('' (' &,)",D%,6' (&6' A",?,!(&' '!'%,:' %*' G>!D>' (' B('%,:' *-' %>(%' (:% B!)>%' *DD('!*&(""C' D*&6,'D,&6' :*B' A*,%:C' A>!"*''A>C' >!'L %*:C'%>,:,' G('' ?*::*G,6' G>(%,E,:' (6B!%%,6' *-'?,!&)' 6,("% G!%>' ?C' G(C' *-' D*B B*&JA"(D,' G>!",'%>,',' ("" %>,B','E,'' "!%%",' D.'%!E(%,6' !&'),&,:('' ",('%' *-' ("" !&' '!(' !&*:' (&6' '%!"" ","'' ,'%,,B,6'"(&).!'>' ?C'%>,'!6,' *-'%>,'A.:,' (:% *-' G*:6'' (&6' ?,&,(%>' !%'' !&-,D%!*&' >,'):,(%' A('%' *-'%>,' &(%!*&' !'' :,)(:6,6' ?C'%>,',' *:(%*:'' '*' %*' 'A,(F' ('' %>,!:' 'A,D!(" A:*A,:%CH %>,C' :,E,:,&D,' (&6' %:,(%' *B,:' !&' '*B,' B,('.:,' (''%>,' (??!&'' 6*'%>,'?**F'' *-' *','' (&6' ,E,&' !&' :,"!)!*&' %>,C' '%.6C'%>,' B*'% Q,("*.'' *:%>*6*@C' >,',' 6!'D*.:','' (:,' '.'%(!&,6' ?C' ("" %>,' ("" *G,6' (&6' .&(""*G,6' :,'*.:D,'' *-'%>,'%>,(%:,' ?C'%>,' (:%*-'),'%!D."(L %!*&' (&6' *-' B*6."(%!*&' *-' %>,' E*!D,' ?C'%>,' B()&!-!D,&D,' *-' %>,' *:(%*:'' D*'%.B,' ?C' %>,' (:%!-!D,'' *-' %>,' E!:%.*'*' (&6' %>,' B,%>*6'' *-' A(:%!'(&'>!A' ?C' D*BA,%!%!*&' ?C'%>,' 4 !6#$' *'%>,' ?*.&6,''' ','-JD*&D,!% 1-'%>,',' G*:6J(:%!'%'' D*:,'A*&6''%>,' "!E,"C' 'CBA(%>,%!D' !&%,:,'% *-'%>,' A.?"!DK ' G>!D>' !' ?.% "!%%"' !&-,:!*:'%*'%>(%'-,"% -*:':(D,J>*:','K (&6' %>,' ,@A:,''!*&')!E,&' %*' %>!'' 'CBA(%>C' I.!%,' (-%,:' %>,' -('>!*&J *-' %>,' %>,(%:,H (&6' %>,' D*&'%(&DC' G!%>' G>!D>' '.D>' ,@>!?!%!*&'' G,:,' ?:*.)>% ?,-*:,' %>,' D."%.:,6' !&' %>,' "(:),:' A"(D,'' ,&%!%",'' %>,B' ;.'% "!F,' %>,' %>,(%:,' %*' :(&F' ,E,:CG>,:,' (B*&)' %>,' D.'%*B(:C' 6*!&)'' *-' .:?(&' "!-,' -'A,:>(A'' *.:' .&6,:'%(&6!&)' *-' %>!'' ,@%!&D%' A>,&*B,&*&' B(C' ?,' '*B,G>(%' >,"A,6' ?C' D*&&,D%!&)' !%' G!%>' %>,' !BL A:,''!*&' D("",6' -*:%>' !&' *.:' B*'%' '.'D,A%!?",'):,(%' D!%!,'' ?C'%>,' 6!'D*.:','' *-' %>,!:'',(:&,6' ?*6!,'' (''%>,C' -("" 6.,' %>,:,' !'' C,%' G>*""C' G(&%!&)' !&' %>,' B*6,:&' '%(%,' *-' %>!&)'' G>(%' G('' ?C' -(:' %>,' B(!&' B(%%,:' !&' %>,' (&D!,&%' G*:"6K ' %>,' 6!6(D%!D' ",B,&%' (&6' %>,' D*&&,D%!*&' *-' %>,' (!B","'' A.?"!D' 6!'D*.:',' G!%>' %>,' >!)>,:' !&'%:.D%!*&' *-' C*.%>' -' %>,' "(%%,:' (%' A:,',&%' ('' G,' '(C' ,6.D(%,'' %>,' ?*C' *-' %>,' D.'%.:,6' D"('' %*' ?,' (' A:*-,''*:' *-' A>!"*")C' !%' ,6.D(%,6' >!B' %>,&%*' ?,' (' A:*-,''*:' *-',"*I.,&D,' (&6' !&'-(D%' *-' %>!'

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G>*",',BA!:,'%*"6'.A*&'%>,'-!&(&D,''*-'%>,'%*G&''*-' '!('
!&*:' &'%>,'D*.:','*-'%>,'!BA,:!('A,:!*6'%>,'&.B?,:'
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%>,'!&D:,(',' (&6'%>,C')(!&,6')*.&6'B*:,' (&6'B*:,'!&'
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&' BC:&(''&'%>,'&(%!E,'D*.&%:C'*-(6B!:,:' (%%,'%'%>,'&,G'"*)!D('(&6'
B,:'&'%>,'G!'6*B'*-' *B,:'*&' (%'%>,'('(B,'%!B,' ,BA!:!D' B,6!D!&,'
%>,'-*.&6(%!*&'*-'D!%!,''!&' '!('!&' # '("'O' S?b'=!*'G'!* '7' . F
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,"",&!'BH %>,' 6,'D:!A%!*&' *-' %>,' ,"",&,'' *-'>!'' %!B,' !&' %>,' '*"!%.6,' *-' "?!(' (' !&' %>,' ".@.:C' *-' !D*B,6!(' (&6' *-' (:'.'H' %>,' ,@>*:%(%!*&'' %*' %>,' !&6!E!6.("' (' %*' (&',(:&,'%' D*&6.D%' *-' "!-,' (&6' %*' ("" (' %*' %>,!:' F,,A!&)' %*),%>,:' !&' .&!%CK -*:B' %>,' ?,'%' ,E!6,&D,' %>(%' ,E,&' *-' %>,' ,"",&!'B' *-' '!(' !&*:' !&' %>,' %!B,' *-' %>,' ,BA!:,' %>,' G*:6' *-' %>,' A*,% >*"6'')**6P \' >,' '.&' ,E,&' !&' ',%%!&)' !'' ,E,:' %>,' '(B,U

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N 6 < (G>!D -*""*G (: %>*' A:,A(:,6 ?C :*-,''*: !,A,:% %* (DD*BA(&C %>, *:!)!&(" >, 'A,""!&) *- %>, %!(B," (-%,: %>, :,,F -('>!*& G>!D >(" ?,,& (6*A%,6),&,:(""C #%>*.)> &*% .&!-*:B"C ' ,, :,-(D,9 (&6 %>, *DD('!*&(" A:,',&D, *- ,:! & %,:!&!&(%!*& : ,E,& *- ,:B(& G*:6' G!"" !&%,:A*', "!%%", A:(D %F(" 6!–!D."%C\%* %>,!: .', ?C %>, :,(6,: *- %>, &)"!'> -*:!(J *- %>, ?**F

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(A A:*E!&D," *& %>, (&.?, (&6 "(DF ,(U

W C) D; (J

(A K T :,,D,U T >,%,::!%*:C*-%>,&" !"D*"*.:,6 $4*&(+ . "$4):*.&6H %>(%*-T*%>,:-:,I%*G&"UD*"*.:,6!& %-&$ $4*&(& 6#$. "$4):*.&6H %>,TA:*E!&D, *- D>(!(U !& #$ >,T B,B?,:" *-%>, ,"A>!D BA"AD%!*& -:*B%?,%!B,*-%>,,BA,:*: .).'%.'U(:,.&6,:"!&,6%>."F!F*A*"!'

(A K T '!(!&*:U "6 :!,&% &(B,'B '*.(:, ?:(DF,%'%>.'P O !

(A Y K T C:!((&6 ,'*A*%(B!(U "6 :!,&%(" &(B," !&'I.(:,?:(DF,%'

(A Y K T)CA%U

U $+& "& "4$ K (A" J %*69,!&',:%,6 (%%>,,&6 *-* *" H (&6 Y Y (%%>,,&6 *-* *" j

HISPANIA UND AFRICA.

Moderne Namen in nichtlateinischer Schrift.

GALLIA.

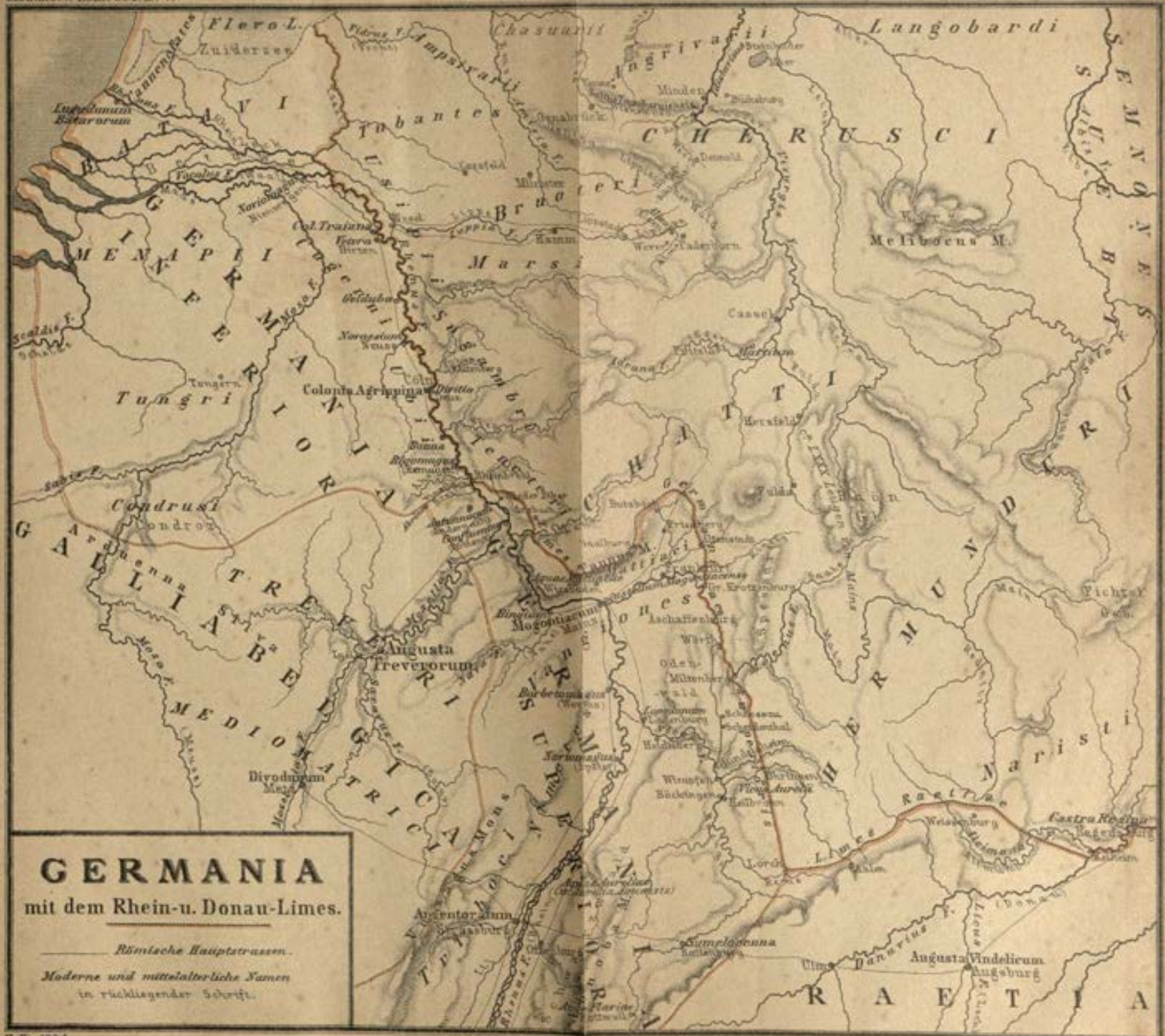
Moderne und mittelalterliche Namen
in rücklagender Schrift.

H. K. 1884.

Berlin Richard Bentley & Son 1887.

C. L. Ohmann lith.

H.K. 1884. Berlin. Richard Bentley & Son. 1887. C.L. Ohmann lith.



GERMANIA
mit dem Rhein-u. Donau-Limes.

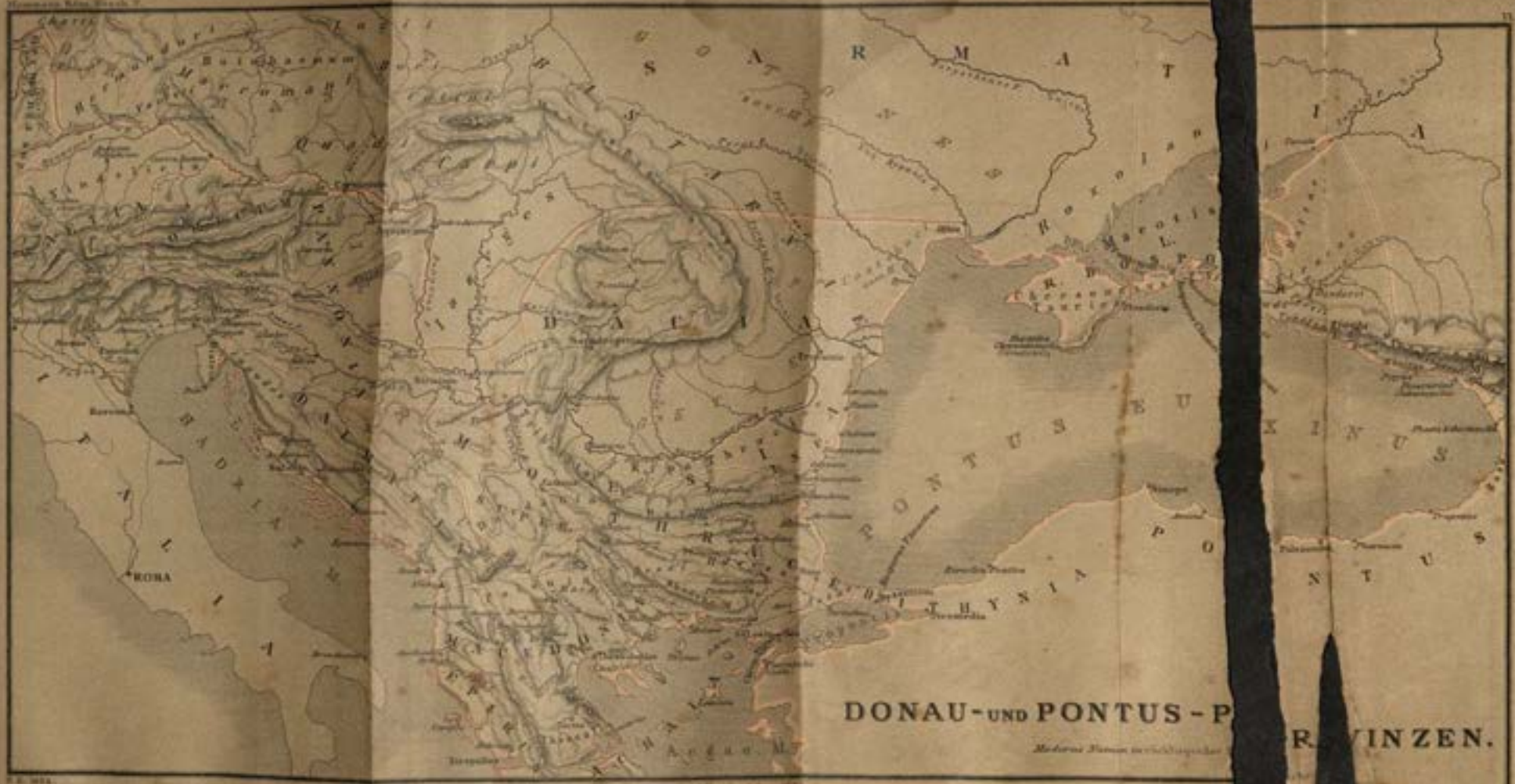
Römische Hauptstrassen.

Moderne und mittelalterliche Namen in ruchliegender Schrift.

R.K. 1884.

Berlin, Richard Bentley & Son. 1887.

C.L. Ehmann lith.


SARMATIA
DACIA
ROMA
PONTUS EUXINUS
THYSIA
DONAU- UND PONTUS-P
VINZEN.

GRIECHENLAND.

- Athenisches Gebiet.
- Andere freie Städte.
- Provinz Achaia.

Glieder der Delphischen Amphiktyonie seit K. Augustus.

E. K. 1884.

Berlin: Richard Bentley & Son 1887.

C. L. Ohmann lith.

KLEIN-ASIEN.

PONTUS EUXEINUS
THRAKE
Propontis
BITHYNIA
PAPHLAGONIA
GALATIA
ASIA
KAPPADOKIA
ARMENIA
MESOPOTAMIA
SYRIA

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